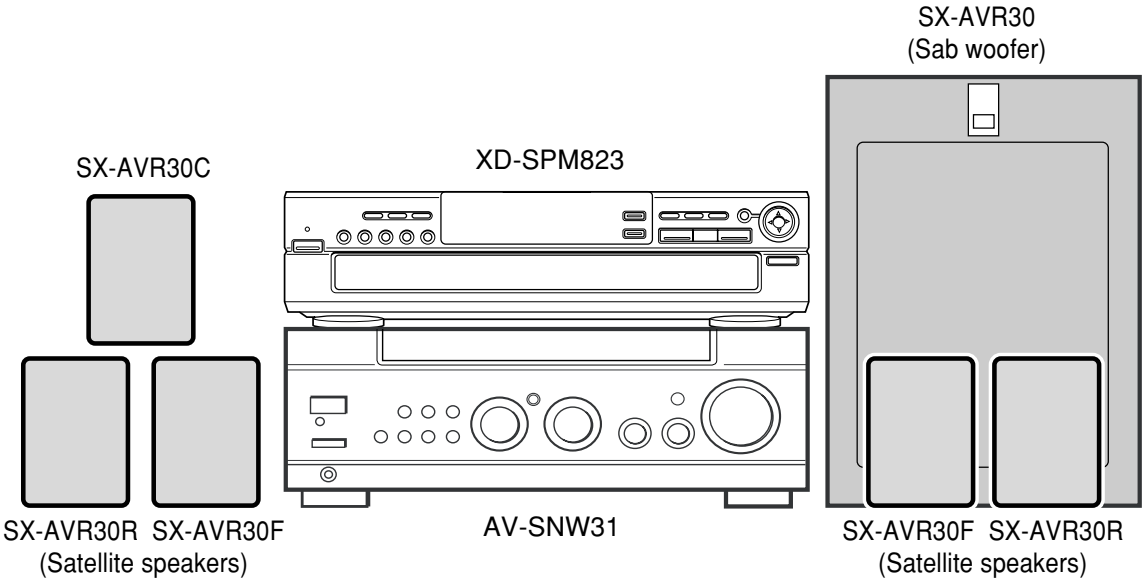
HT-DV2300 U (B)



SERVICE MANUAL

DVD HOME THEATER SYSTEM BASIC DVD/CD MECHANISM : DP-M2

SYSTEM	DTS DECODER	DVD PLAYER	
HT-DV2300	AV-SNW31	XD-SPM823	

aiwa

S/M Code No. 09-02C-366-1N1

DATA

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SPECIFICATIONS -1/1

Power supply	120 V AC, 60 Hz
Power consumption	16 W
Power consumption in standby mode	1.4 W
Weight	5.7 kg (12.9 lbs)
External dimensions	430 × 118 × 414 mm (17 × 4.7 × 16.3 inches) (w × h × d)
Laser	Semiconductor laser, wavelength: 650/780 nm
Signal format	NTSC
Supported discs	DVD video discs: 12 cm (single-sided single layer, single-sided double layer, double-sided double layer), 8 cm (single-sided single layer, single-sided double layer, double-sided double layer)
	Compact discs (CD-DA, MP3): 12 cm and 8 cm
Component video output	
	Y output: 1.0 Vp-p (75 ohms, sync negative)
	P_R/C_R, P_B/C_B outputs: 0.7 Vp-p (75 ohms)
	RCA jacks ($C_R/C_B/Y$) × 1
S-video output	Y output: 1.0 Vp-p (75 ohms, sync negative)
	C output: 0.3 Vp-p
	4-pin mini DIN jack × 1
Composite video output	
	1.0 Vp-p (75 ohms, sync negative)
	RCA jack × 1
Audio output	Digital output: 0.5 Vp-p (75 ohms), RCA jack × 1
	0.5 Vp-p (75 ohms), Fiber optical connector × 1
	Analog output: 2.0 Vrms (1 kHz, 0 dB, 330 ohms), RCA jacks (L/R) × 1
Audio output characteristics	
	Signal-to-noise ratio: More than 95 dB (EIAJ)
	Dynamic range: More than 90 dB (EIAJ)
	Harmonic distortion: 0.008%
	Frequency response: CD: 4 Hz to 20 kHz DVD: 4 Hz to 22 kHz (48-kHz sampling), 4 Hz to 44 kHz (96-kHz sampling)
Operating temperatures	
	5°C to 35°C (41F to 95F)

Specifications are subject to change without notice.

NOTE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION

Modifications or adjustments to this product, which are not expressly approved by the manufacturer, may void the user's right or authority to operate this product.

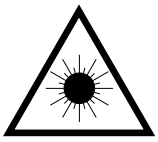
- Manufactured under license from Dolby Laboratories. "Dolby", "Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories. Confidential unpublished works. ©1992-1999 Dolby Laboratories. All rights reserved.
- "DTS" and "DTS Digital Out" are trademarks of Digital Theater Systems, Inc.

As an ENERGY STAR® Partner, AIWA has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING -1/1

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!
WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynling laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!
Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

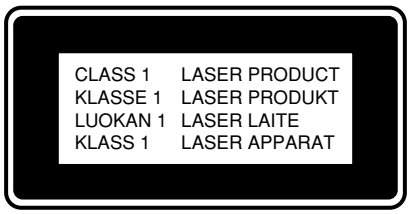
VARNING!
Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!
Usynlig laserstråling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

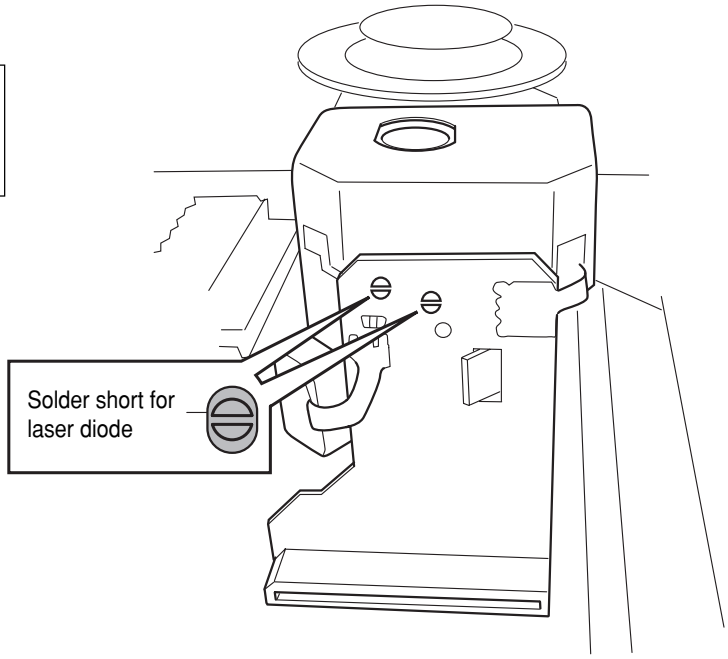
This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.



Precaution to replace Optical block

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in the right figure.



ACCESSORIES PARTS LIST -1/1

! = ⚠SAFTY PARTS
C = Components marked
All components used on this model at the production line are shown in this service manual.
However, please note that not all components will be available as spare parts for after-sales service.
Components marked S and O are designated as spare parts for service and will be stocked at the spare parts centers.
Components marked X and R are not designated as spare parts for after sales service, and will not be stocked at the spare parts centers.

UNIT-NAME	!	C	REF-NO	PARTS-NO	PARTS-NAME	SUFFIX&MODEL
						XD-SPM823 UBC1
		O	AS1001	S8-35R-S00-39Y	IB,XD-SPM823	a
		O	AS1002	S7-11R-1N0-86D	RC UNIT,RC-CVL55	a
		O	AS1003	S6-11R-1G0-01B	PLUG ASSY,1WAY YELLOW FOR AIW	a

CAUTION BEFORE STARTING SERVICING

Electronic parts are susceptible to static electricity and may easily damaged, so do not forget to take a proper grounding treatment as required.

Many screws are used inside the unit. To prevent missing, dropping, etc. of the screws, always use a magnetized screw driver in servicing. Several kinds of screws are used and some of them need special cautions. That is, take care of the tapping screws securing molded patrs and fine pitch screws used to secure metal parts. If they are used improperly, the screw holes will be easily damaged and the parts can not be fixed.

CABINET DISASSEMBLY

1. Top Case

1. Release 7 screws (A). (See Fig. 2-1)
2. Lift the top case with holding the back of it, and remove it in the direction of the arrow.

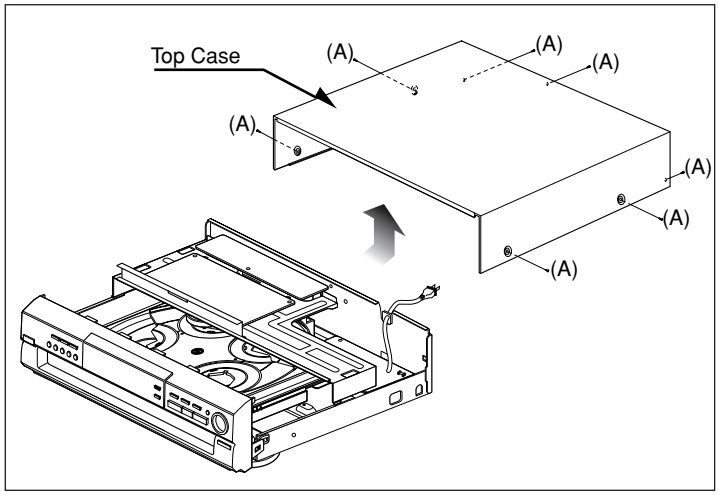


Fig. 2-1

2. Tray Door

1. Eject the disc tray.
2. Lift up the tray door in the direction of the arrow.

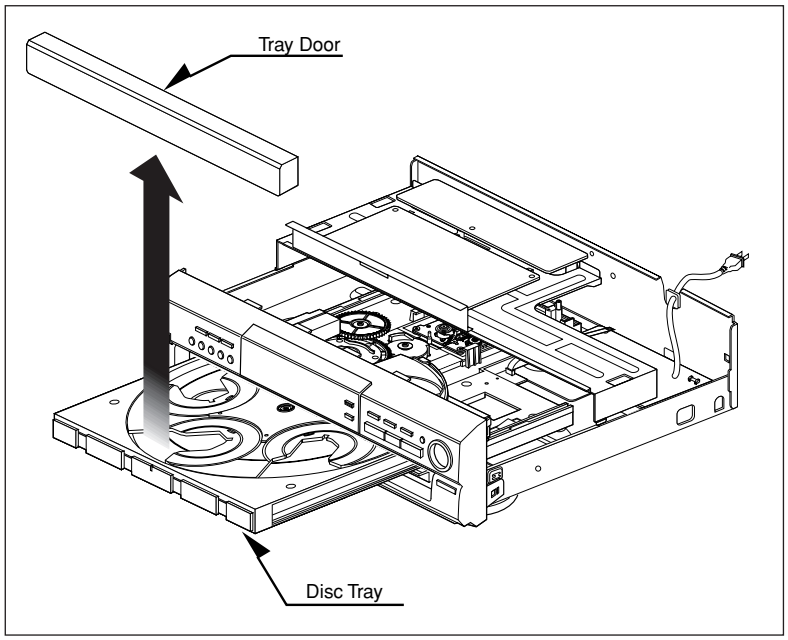


Fig. 2-2

3. Front Panel

1. Eject the disc tray. (See Fig. 2-2)
2. Remove the tray door. (See Fig. 2-2)
3. Pull the front panel toward you while pressing 5 stoppers to disengage, and remove the front panel. (See Fig. 2-3)

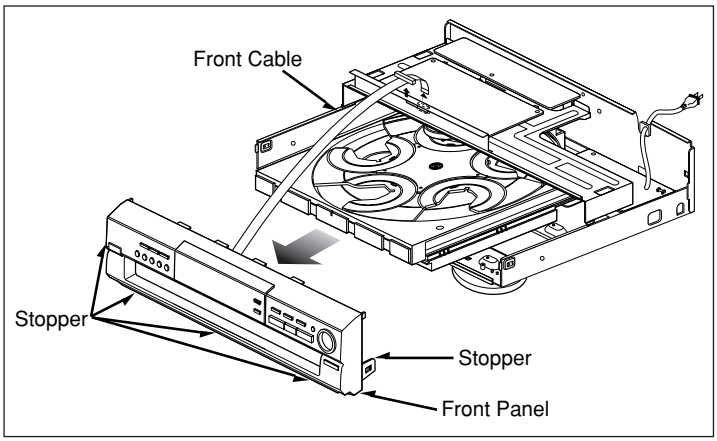


Fig. 2-3

CIRCUIT BOARD DISASSEMBLY

Note: Before removing the main circuit board, be sure to shortcircuit the laserdiode output land. After replacing the main circuit board, open the land after inserting the flexible connector. (Refer to Mechanism Disassembly)

1. Disassemble DVD circuit board, Jack circuit board, Power circuit board and MD Ass'y DPM1.

1. Remove the top case.(See Fig. 2-1)
2. Release 10 screws (B).
3. Disassemble DVD circuit board and Jack circuit board from Bracket Main.
4. Release 3 screws(C) at Bracket Main.
5. Disassemble Bracket Main from Main chassis.
6. Release 4 screws(D) at MD Ass'y DP-M2.
7. Turn the portion the direction of arrow to move the Base Assembly Tray in front of you.
8. Release the other 3 screws(E), at MD Ass'y DP-M2
9. Disassemble MD Ass'y DP-M2 from Main chassis.
10. Release 4 screws(F) at Power circuit.
11. Disassemble power circuit board from Main chassis.

2. Front, Key Circuit Board

1. Remove the front panel.(See Fig. 2-3)
2. Release 8 screws (G), and remove the Front, Key circuit board.

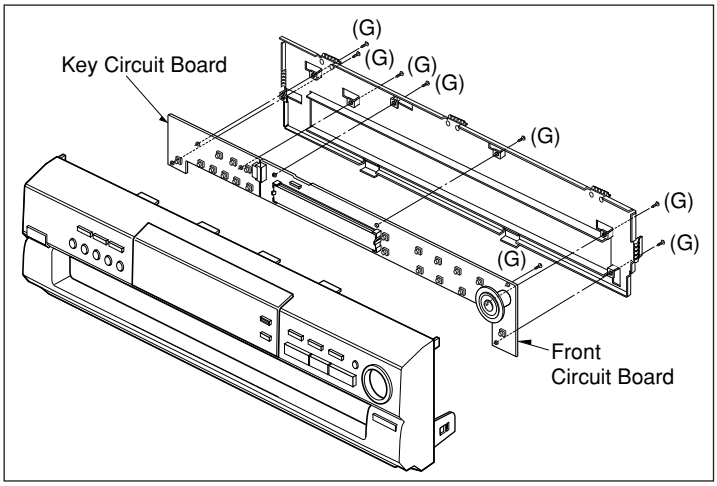


Fig. 2-5

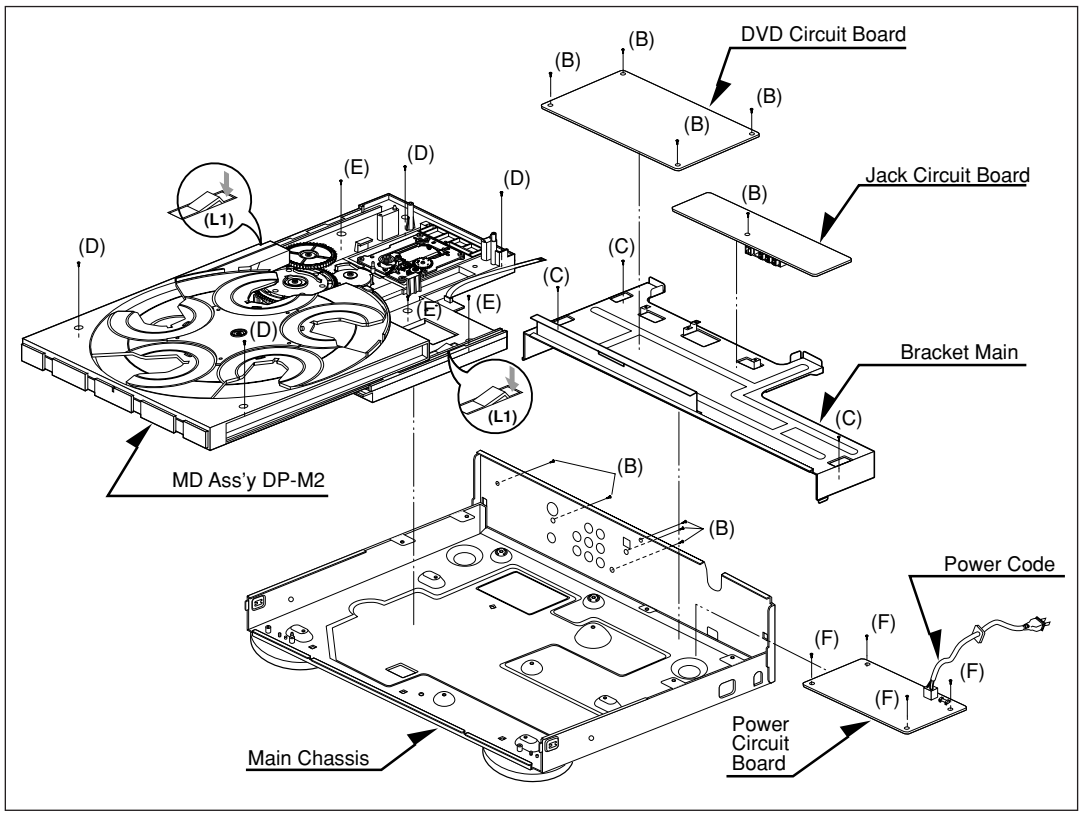


Fig. 2-4

ELECTRICAL PARTS LIST -1/10

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UNIT-NAME	!	C	REF-NO	PARTS-NO	PARTS-NAME	SUFFIX&MODEL
						XD-SPM823 UBC1
DVD		X	C 201	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 202	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 203	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 204	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 205	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 206	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 207	SC-H11-05D-942	C-CAP,CER 1UF-10V	a
DVD		X	C 208	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 209	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 210	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		O	C 211	SC-H81-06F-611	C-CAP,E 10UF-16V	a
DVD		O	C 212	SC-H81-06F-611	C-CAP,E 10UF-16V	a
DVD		O	C 213	SC-H81-06F-611	C-CAP,E 10UF-16V	a
DVD		X	C 214	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 215	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 216	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 217	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 218	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 219	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		O	C 220	SC-H81-06F-611	C-CAP,E 10UF-16V	a
						XD-SPM823 UBC1
DVD		X	C 224	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 225	SC-H11-05D-942	C-CAP,CER 1UF-10V	a
DVD		X	C 226	SC-H11-05D-942	C-CAP,CER 1UF-10V	a
DVD		X	C 229	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 230	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 231	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		O	C 232	SC-H84-76C-611	C-CAP,E 47UF-6.3V	a
DVD		X	C 238	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 239	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 240	SC-H12-22K-562	C-CAP,2200F-50V	a
DVD		X	C 242	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 245	SC-H11-05D-942	C-CAP,CER 1UF-10V	a
DVD		X	C 251	SC-H11-05D-942	C-CAP,CER 1UF-10V	a
DVD		X	C 252	SC-H41-00K-112	C-CAP,10P-50V	a
DVD		X	C 253	SC-H11-05D-942	C-CAP,CER 1UF-10V	a
DVD		X	C 254	SC-H11-05D-942	C-CAP,CER 1UF-10V	a
DVD		X	C 255	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 258	SC-H11-05D-942	C-CAP,CER 1UF-10V	a
DVD		O	C 261	SC-H81-06F-611	C-CAP,E 10UF-16V	a
DVD		O	C 262	SC-H81-06F-611	C-CAP,E 10UF-16V	a
						XD-SPM823 UBC1
DVD		O	C 263	SC-H81-06F-611	C-CAP,E 10UF-16V	a
DVD		O	C 264	SC-H81-06F-611	C-CAP,E 10UF-16V	a
DVD		O	C 265	SC-H81-06F-611	C-CAP,E 10UF-16V	a
DVD		O	C 272	SC-H84-76C-611	C-CAP,E 47UF-6.3V	a
DVD		X	C 273	SC-H12-25F-944	C-CAP,2.2UF-16V	a
DVD		O	C 274	SC-H84-76C-611	C-CAP,E 47UF-6.3V	a
DVD		O	C 278	SC-H81-06F-611	C-CAP,E 10UF-16V	a
DVD		O	C 279	SC-H81-06F-611	C-CAP,E 10UF-16V	a
DVD		O	C 280	SC-H81-06F-611	C-CAP,E 10UF-16V	a
DVD		O	C 281	SC-H81-06F-611	C-CAP,E 10UF-16V	a
DVD		O	C 284	SC-H84-76C-611	C-CAP,E 47UF-6.3V	a
DVD		O	C 285	SC-H81-06F-611	C-CAP,E 10UF-16V	a
DVD		X	C 286	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		O	C 287	SC-H81-06F-611	C-CAP,E 10UF-16V	a
DVD		O	C 288	SC-H81-06F-611	C-CAP,E 10UF-16V	a
DVD		X	C 290	SC-H42-20K-412	C-CAP,CER 22P-50V	a
DVD		X	C 291	SC-H42-20K-412	C-CAP,CER 22P-50V	a
DVD		X	C 292	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 293	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 294	SC-H11-04K-942	C-CAP,0.1UF 50V	a
						XD-SPM823 UBC1
DVD		X	C 295	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 296	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		O	C 297	SC-H84-77C-611	C-CAP,E 470-6.3V	a
DVD		O	C 2A0	SC-H84-76C-611	C-CAP,E 47UF-6.3V	a
DVD		X	C 2A3	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		O	C 2A4	SC-H81-06F-611	C-CAP,E 10UF-16V	a
DVD		X	C 2A5	SC-H16-83F-942	CAP,CER 0.068-16	a
DVD		X	C 2A6	SC-H11-02K-562	C-CAP,1000PF 50V	a
DVD		X	C 2A7	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 2A8	SC-H11-52K-562	CAP,CER 1500P-50	a
DVD		X	C 2A9	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 2B3	SC-H13-92K-562	C-CAP,3900PF-50V	a
DVD		X	C 2B4	SC-H16-83F-942	CAP,CER 0.068-16	a
DVD		X	C 2B5	SC-H13-33K-562	C-CAP,CER 0.033UF-50V	a
DVD		X	C 2B9	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 2C1	SC-H11-03K-562	C-CAP,0.01UF-50V	a
DVD		O	C 2C2	SC-H81-06F-611	C-CAP,E 10UF-16V	a
DVD		X	C 2C4	SC-H11-02K-562	C-CAP,1000PF 50V	a
DVD		X	C 2C5	SC-H13-32K-562	C-CAP,3300P-50V	a
DVD		X	C 2C6	SC-H11-02K-562	C-CAP,1000PF 50V	a

ELECTRICAL PARTS LIST -2/10

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DVD		X	C 2C8	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		O	C 2C9	SC-H81-06F-611	C-CAP,E 10UF-16V	a
DVD		O	C 2D0	SC-H84-76C-611	C-CAP,E 47UF-6.3V	a
DVD		O	C 2D1	SC-H84-76C-611	C-CAP,E 47UF-6.3V	a
DVD		X	C 2D2	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 2D3	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		O	C 2D4	SC-H84-76C-611	C-CAP,E 47UF-6.3V	a
DVD		O	C 2D5	SC-H81-06F-611	C-CAP,E 10UF-16V	a
DVD		X	C 2D6	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 2D7	SC-H11-52K-562	CAP,CER 1500P-50	a
DVD		X	C 2D9	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 2M2	SC-H16-82K-562	C-CAP,CER 6800P-50V	a
DVD		X	C 2M3	SC-H14-72K-562	C-CAP,4700F-50V	a
DVD		X	C 2M4	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 2M5	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		O	C 2M6	SC-H81-07F-611	C-CAP,E 100UF-16V	a
DVD		X	C 2M7	SC-H12-25F-944	C-CAP,2.2UF-16V	a
DVD		X	C 2M9	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 2N1	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 2N2	SC-H11-04K-942	C-CAP,0.1UF 50V	a
						XD-SPM823 UBC1
DVD		X	C 2N3	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 2N4	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 2N5	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 2N6	SC-H12-23K-942	C-CAP,0.022UF-50V	a
DVD		O	C 2N7	SC-H84-76C-611	C-CAP,E 47UF-6.3V	a
DVD		O	C 2N8	SC-H84-76C-611	C-CAP,E 47UF-6.3V	a
DVD		X	C 301	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 302	SC-H12-25F-944	C-CAP,2.2UF-16V	a
DVD		X	C 303	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 304	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 305	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 306	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 307	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		O	C 308	SC-H84-76C-611	C-CAP,E 47UF-6.3V	a
DVD		X	C 309	SC-H12-25F-944	C-CAP,2.2UF-16V	a
DVD		X	C 310	SC-H11-03K-562	C-CAP,0.01UF-50V	a
DVD		O	C 311	SC-H84-76C-611	C-CAP,E 47UF-6.3V	a
DVD		X	C 314	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 316	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		O	C 317	SC-H84-76C-611	C-CAP,E 47UF-6.3V	a
						XD-SPM823 UBC1
DVD		X	C 318	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 319	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 320	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 321	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 3F1	SC-H12-25F-944	C-CAP,2.2UF-16V	a
DVD		X	C 3F2	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		O	C 3F3	SC-H84-76C-611	C-CAP,E 47UF-6.3V	a
DVD		O	C 401	SC-H84-76C-611	C-CAP,E 47UF-6.3V	a
DVD		O	C 402	SC-H84-76C-611	C-CAP,E 47UF-6.3V	a
DVD		O	C 403	SC-H84-76C-611	C-CAP,E 47UF-6.3V	a
DVD		O	C 404	SC-H84-76C-611	C-CAP,E 47UF-6.3V	a
DVD		O	C 405	SC-H84-76C-611	C-CAP,47UF-6.3V	a
DVD		X	C 406	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		O	C 408	SC-H81-06F-611	C-CAP,E 10UF-16V	a
DVD		O	C 409	SC-H82-27D-611	C-CAP,E 220-10V	a
DVD		X	C 410	SC-H42-71K-412	CAP,CER 270P-50	a
DVD		X	C 411	SC-H11-02K-562	C-CAP,1000PF 50V	a
DVD		X	C 412	SC-H42-71K-412	CAP,CER 270P-50	a
DVD		O	C 413	SC-H81-06F-611	C-CAP,E 10UF-16V	a
DVD		X	C 414	SC-H11-04K-942	C-CAP,0.1UF 50V	a
						XD-SPM823 UBC1
DVD		O	C 415	SC-H81-06F-611	C-CAP,E 10UF-16V	a
DVD		X	C 416	SC-H11-02K-562	C-CAP,1000PF 50V	a
DVD		X	C 417	SC-H42-71K-412	CAP,CER 270P-50	a
DVD		X	C 418	SC-H13-92K-562	C-CAP,3900PF-50V	a
DVD		O	C 419	SC-H81-07F-611	C-CAP,E 100UF-16V	a
DVD		X	C 420	SC-H13-92K-562	C-CAP,3900PF-50V	a
DVD		O	C 421	SC-H81-07F-611	C-CAP,E 100UF-16V	a
DVD		O	C 422	SC-H81-06F-611	C-CAP,E 10UF-16V	a
DVD		X	C 423	SC-H42-71K-412	CAP,CER 270P-50	a
DVD		X	C 424	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		O	C 501	SC-H84-76C-611	C-CAP,E 47UF-6.3V	a
DVD		X	C 503	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		O	C 504	SC-H81-06F-611	C-CAP,E 10UF-16V	a
DVD		X	C 506	SC-H12-25F-944	C-CAP,2.2UF-16V	a
DVD		O	C 507	SC-H84-76C-611	C-CAP,E 47UF-6.3V	a
DVD		X	C 508	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 509	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 510	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 511	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 512	SC-H11-04K-942	C-CAP,0.1UF 50V	a

ELECTRICAL PARTS LIST -3/10

! = ⚠ SAFTY PARTS
C = Components marked
All components used on this model at the production line are shown in this service manual.
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UNIT-NAME	!	C	REF-NO	PARTS-NO	PARTS-NAME	SUFFIX&MODEL
						XD-SPM823 UBC1
DVD		X	C 513	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 514	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 515	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 516	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 517	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 518	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 519	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 520	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 521	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 522	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 523	SC-H12-25F-944	C-CAP,2.2UF-16V	a
DVD		X	C 525	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 526	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 527	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 528	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 529	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 530	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 531	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 532	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 533	SC-H11-04K-942	C-CAP,0.1UF 50V	a
						XD-SPM823 UBC1
DVD		X	C 534	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 535	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 536	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 538	SC-H12-25F-944	C-CAP,2.2UF-16V	a
DVD		X	C 540	SC-H41-80K-412	CAP,CER 18PF-50V	a
DVD		X	C 541	SC-H42-70K-412	C-CAP,CER 27PF-50V	a
DVD		O	C 542	SC-H84-76C-611	C-CAP,E 47UF-6.3V	a
DVD		X	C 543	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 544	SC-H12-25F-944	C-CAP,2.2UF-16V	a
DVD		X	C 546	SC-H42-21K-412	C-CAP,220P-50V	a
DVD		X	C 549	SC-H42-21K-412	C-CAP,220P-50V	a
DVD		X	C 550	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 553	SC-H42-21K-412	C-CAP,220P-50V	a
DVD		X	C 554	SC-H11-04K-942	C-CAP,0.1UF 50V	a
DVD		X	C 555	SC-H41-01K-412	C-CAP,100P-50V	a
DVD		X	C 556	SC-H41-01K-412	C-CAP,100P-50V	a
DVD		X	C 557	SC-H42-70K-412	C-CAP,CER 27PF-50V	a
DVD		O	C 562	SC-H84-76C-611	C-CAP,E 47UF-6.3V	a
DVD		X	C 563	SC-H12-25F-944	C-CAP,2.2UF-16V	a
DVD		O	C 570	SC-H84-76C-611	C-CAP,E 47UF-6.3V	a
						XD-SPM823 UBC1
DVD		X	C 571	SC-H12-25F-944	C-CAP,2.2UF-16V	a
DVD		O	D 2A1	SD-S20-200-9CA	DIODE,DAN202K	a
DVD		O	D 2A2	SD-S20-200-9CA	DIODE,DAN202K	a
DVD		O	D 2A3	SD-S20-200-9CA	DIODE,DAN202K	a
DVD		S	IC 201	SI-LNR-HY0-02B	IC,HDC25D811B	a
DVD		S	IC 203	SI-EB1-216-16B	IC,M12L16161A-7T-L	a
DVD		O	IC 206	SI-TO7-040-00F	IC,TC7W04FU	a
DVD		S	IC 2A1	SI-LNR-HI0-03A	IC,HD153702TF	a
DVD		O	IC 2A2	SI-JR3-414-00C	IC,NJM3414AM-TE1,3K/REEL	a
DVD		S	IC 2A4	SI-KE3-930-00G	IC,KIA393F-EL	a
DVD		S	IC 2M1	SI-FA3-031-00A	IC,KA3031	a
DVD		O	IC 301	SI-CTM-HY0-11A	IC,HS353106	a
DVD		S	IC 305	SI-MMR-HY0-25A	IC,HY57643220CT-7I	a
DVD		O	IC 3F1A	S9-57R-316-1D0	IC,29LV800BA-90PFTN(PROGRAM)	a
DVD		S	IC 401	SI-PRP-CI0-03B	IC,CS4391-KZR	a
DVD		O	IC 402	SI-JR4-580-00B	IC,NJM4580M	a
DVD		S	IC 501	SI-NS8-601-00A	IC,NDV8601	a
DVD		S	IC 502	SI-MMR-AL0-12A	IC,AT93C56-10SC(SI)-2.7-8S1	a
DVD		S	IC 503	SI-FA7-424-40F	IC,MM74HCT244SJ	a
DVD		S	IC 506	SI-PMG-RH0-03A	IC,BA18BC0FP-E2	a
						XD-SPM823 UBC1
DVD		O	L 201	S2-00H-JC1-02A	CER,FILTER HB-1M2012-102JT	a
DVD		O	L 203	S2-00H-JC1-02A	CER,FILTER HB-1M2012-102JT	a
DVD		O	L 206	S2-00H-JC1-02A	CER,FILTER HB-1M2012-102JT	a
DVD		O	L 207	S2-00H-JC1-02A	CER,FILTER HB-1M2012-102JT	a
DVD		O	L 208	S2-00H-JC1-02A	CER,FILTER HB-1M2012-102JT	a
DVD		O	L 2A1	S2-00H-JC1-02A	CER,FILTER HB-1M2012-102JT	a
DVD		O	L 2A2	S2-00H-JC1-02A	CER,FILTER HB-1M2012-102JT	a
DVD		O	L 301	S2-00H-JC1-02A	CER,FILTER HB-1M2012-102JT	a
DVD		O	L 302	S2-00H-JC1-02A	CER,FILTER HB-1M2012-102JT	a
DVD		O	L 3F1	S2-00H-JC1-02A	CER,FILTER HB-1M2012-102JT	a
DVD		O	L 501	S2-00H-JC1-02A	CER,FILTER HB-1M2012-102JT	a
DVD		O	L 502	S2-00H-JC1-02A	CER,FILTER HB-1M2012-102JT	a
DVD		O	L 504	S2-00H-JC1-02A	CER,FILTER HB-1M2012-102JT	a
DVD		O	L 505	S2-00H-JC1-02A	CER,FILTER HB-1M2012-102JT	a
DVD		O	L 506	S2-00H-JC1-02A	CER,FILTER HB-1M2012-102JT	a
DVD		O	L 508	S2-00H-JC1-02A	CER,FILTER HB-1M2012-102JT	a
DVD		O	P 3101	S6-30R-3S0-06E	CONN,CABLE 9PIN 2MM	a
DVD		O	P 3102	S6-30R-3S0-06C	CONN,CABLE 10PIN 2.0MM	a
DVD		O	P 3301	S6-30X-E00-115	CONN,15PIN DOWN LOAD	a
DVD		O	P 3901	S6-30X-E00-120	CONN,(CIRC),FFC/FPC 04-6232-0	a

ELECTRICAL PARTS LIST -4/10

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UNIT-NAME	!	C	REF-NO	PARTS-NO	PARTS-NAME	SUFFIX&MODEL
						XD-SPM823 UBC1
DVD		O	P 4601	S6-30X-E00-126	CONN,(CIRC),FFC/FPC 04-6232-0	a
DVD		O	PMD02	S6-30R-FB0-2W0	CONN,04-6232-123-008-80	a
DVD		O	PMD03	S6-30X-E00-122	CONN,(CIRC),FFC/FPC 04-6232-0	a
DVD		O	Q 2A1	ST-R10-370-9BB	C-TR,2SA1037K-Q	a
DVD		O	Q 2A2	ST-R10-370-9BB	C-TR,2SA1037K-Q	a
DVD		S	Q 2A5	ST-R38-820-9AA	C-TR,KTC3882	a
DVD		S	Q 2A6	ST-R38-820-9AA	C-TR,KTC3882	a
DVD		S	Q 2M1	ST-R12-400-9AP	TR,DTC124EK TP	a
DVD		S	Q 301	ST-R12-400-9AP	TR,DTC124EK TP	a
DVD		X	R 201	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 202	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 203	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X	R 204	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X	R 207	SR-H10-04C-622	C-RES,1M-1/16W	a
DVD		X	R 217	SR-H01-02C-622	RES,10-1/16W	a
DVD		X	R 218	SR-H47-00C-622	RES,470-1/16W	a
DVD		X	R 219	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X	R 220	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X	R 221	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 230	SR-H10-00C-622	RES,100-1/16W	a
						XD-SPM823 UBC1
DVD		X	R 231	SR-H10-00C-622	RES,100-1/16W	a
DVD		X	R 232	SR-H10-00C-622	RES,100-1/16W	a
DVD		X	R 233	SR-H10-00C-622	RES,100-1/16W	a
DVD		X	R 234	SR-H10-00C-622	RES,100-1/16W	a
DVD		X	R 235	SR-H10-00C-622	RES,100-1/16W	a
DVD		X	R 236	SR-H10-00C-622	RES,100-1/16W	a
DVD		X	R 237	SR-H10-00C-622	RES,100-1/16W	a
DVD		X	R 239	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 240	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 241	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 242	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 243	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 252	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 253	SR-H02-22C-622	RES,22-1/16W	a
DVD		X	R 254	SR-H02-22C-622	RES,22-1/16W	a
DVD		X	R 255	SR-H02-22C-622	RES,22-1/16W	a
DVD		X	R 256	SR-H02-22C-622	RES,22-1/16W	a
DVD		X	R 257	SR-H02-22C-622	RES,22-1/16W	a
DVD		X	R 258	SR-H02-22C-622	RES,22-1/16W	a
DVD		X	R 259	SR-H02-22C-622	RES,22-1/16W	a
						XD-SPM823 UBC1
DVD		X	R 260	SR-H02-22C-622	RES,22-1/16W	a
DVD		X	R 261	SR-H02-22C-622	RES,22-1/16W	a
DVD		X	R 262	SR-H02-22C-622	RES,22-1/16W	a
DVD		X	R 263	SR-H02-22C-622	RES,22-1/16W	a
DVD		X	R 264	SR-H02-22C-622	RES,22-1/16W	a
DVD		X	R 265	SR-H02-22C-622	RES,22-1/16W	a
DVD		X	R 266	SR-H02-22C-622	RES,22-1/16W	a
DVD		X	R 267	SR-H02-22C-622	RES,22-1/16W	a
DVD		X	R 268	SR-H02-22C-622	RES,22-1/16W	a
DVD		X	R 269	SR-H02-22C-622	RES,22-1/16W	a
DVD		O	R 273	SR-H15-01C-622	C-RES,M 1.5K-1/16W	a
DVD		X	R 274	SR-H62-00C-622	RES,620-1/16W	a
DVD		O	R 275	SR-H15-01C-622	C-RES,M 1.5K-1/16W	a
DVD		X	R 276	SR-H91-00C-622	RES,910-1/16W	a
DVD		X	R 277	SR-H15-00C-622	RES,150 1/16W	a
DVD		X	R 278	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 279	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 281	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 288	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X	R 290	SR-H00-00C-622	RES,0-1/16W	a
						XD-SPM823 UBC1
DVD		X	R 291	SR-H10-00C-622	RES,100-1/16W	a
DVD		X	R 293	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 2A1	SR-H09-12C-622	C-RES,91-1/16W	a
DVD		X	R 2A2	SR-H00-00C-622	RES,0-1/16W	a
DVD		O	R 2A6	SR-H12-02C-422	C-RES,M 12K-1/16W	a
DVD		X	R 2A9	SR-H56-02C-622	RES,56K-1/16W	a
DVD		X	R 2B0	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X	R 2B1	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X	R 2B2	SR-H01-82C-622	RES,18-1/16W	a
DVD		X	R 2B3	SR-H01-82C-622	RES,18-1/16W	a
DVD		X	R 2B4	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 2B5	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X	R 2B6	SR-H01-82C-622	RES,18-1/16W	a
DVD		X	R 2B7	SR-H01-82C-622	RES,18-1/16W	a
DVD		X	R 2B8	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 2C0	SR-H56-01C-622	RES,5.6K-1/16W	a
DVD		X	R 2C4	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X	R 2C5	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X	R 2C6	SR-H56-01C-622	RES,5.6K-1/16W	a
DVD		X	R 2C7	SR-H56-01C-622	RES,5.6K-1/16W	a

ELECTRICAL PARTS LIST -5/10

! = ⚠ SAFTY PARTS
C = Components marked
All components used on this model at the production line are shown in this service manual.
However, please note that not all components will be available as spare parts for after-sales service.
Components marked S and O are designated as spare parts for service and will be stocked at the spare parts centers.
Components marked X and R are not designated as spare parts for after sales service, and will not be stocked at the spare parts centers.

UNIT-NAME	!	C	REF-NO	PARTS-NO	PARTS-NAME	SUFFIX&MODEL
						XD-SPM823 UBC1
DVD		X R	2C8	SR-H56-01C-622	RES,5.6K-1/16W	a
DVD		X R	2C9	SR-H56-01C-622	RES,5.6K-1/16W	a
DVD		X R	2D0	SR-H56-01C-622	RES,5.6K-1/16W	a
DVD		X R	2D1	SR-H00-00C-622	RES,0-1/16W	a
DVD		X R	2D2	SR-H00-00C-622	RES,0-1/16W	a
DVD		X R	2D3	SR-H56-01C-622	RES,5.6K-1/16W	a
DVD		X R	2D4	SR-H56-01C-622	RES,5.6K-1/16W	a
DVD		X R	2D5	SR-H68-01C-622	RES,6.8K-1/16W	a
DVD		X R	2D6	SR-H09-12C-622	C-RES,91-1/16W	a
DVD		X R	2E6	SR-H10-00C-622	RES,100-1/16W	a
DVD		X R	2E7	SR-H10-00C-622	RES,100-1/16W	a
DVD		X R	2E8	SR-H00-00C-622	RES,0-1/16W	a
DVD		X R	2F1	SR-H22-00C-622	RES,220-1/16W	a
DVD		X R	2F2	SR-H22-00C-622	RES,220-1/16W	a
DVD		X R	2F3	SR-H10-00C-622	RES,100-1/16W	a
DVD		X R	2F4	SR-H10-00C-622	RES,100-1/16W	a
DVD		O R	2F5	SR-H22-02C-422	C-RES,M 22K-1/16W	a
DVD		X R	2F6	SR-H56-01C-622	RES,5.6K-1/16W	a
DVD		X R	2F7	SR-H56-01C-622	RES,5.6K-1/16W	a
DVD		X R	2F8	SR-H22-01C-622	RES,2.2K-1/16W	a
						XD-SPM823 UBC1
DVD		X R	2F9	SR-H22-01C-622	RES,2.2K-1/16W	a
DVD		X R	2G1	SR-H22-01C-622	RES,2.2K-1/16W	a
DVD		X R	2G2	SR-H22-01C-622	RES,2.2K-1/16W	a
DVD		X R	2G3	SR-H56-01C-622	RES,5.6K-1/16W	a
DVD		X R	2G4	SR-H56-01C-622	RES,5.6K-1/16W	a
DVD		X R	2G7	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X R	2G9	SR-H15-00C-622	RES,150 1/16W	a
DVD		X R	2M1	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X R	2M2	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X R	2M3	SR-H75-01C-622	RES,7.5K-1/16W	a
DVD		X R	2M5	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X R	2M6	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X R	2M7	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X R	2M8	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X R	2M9	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X R	2N0	SR-H12-02C-622	C-RES,12K-1/16W	a
DVD		X R	2N1	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X R	2N2	SR-H56-01C-622	RES,5.6K-1/16W	a
DVD		X R	2N3	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X R	2N4	SR-H15-02C-622	RES,15K 1/16W	a
						XD-SPM823 UBC1
DVD		X R	2N5	SR-H12-02C-622	C-RES,12K-1/16W	a
DVD		X R	2N7	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X R	2N8	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X R	2N9	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X R	2P1	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X R	2P2	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X R	2P3	SR-H47-01C-622	RES,4.7K-1/16W	a
DVD		X R	2P4	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X R	2P5	SR-H12-01C-622	RES,1.2K-1/16W	a
DVD		X R	2P7	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X R	2P8	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X R	2P9	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X R	2Q1	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X R	2Q2	SR-H12-02C-622	C-RES,12K-1/16W	a
DVD		X R	2Q3	SR-H15-02C-622	RES,15K 1/16W	a
DVD		X R	2Q7	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X R	2Q8	SR-H22-02C-622	RES,22K-1/16W	a
DVD		X R	2R1	SR-H00-00C-622	RES,0-1/16W	a
DVD		X R	2R2	SR-H00-00C-622	RES,0-1/16W	a
DVD		X R	303	SR-H00-00C-622	RES,0-1/16W	a
						XD-SPM823 UBC1
DVD		X R	306	SR-H47-01C-622	RES,4.7K-1/16W	a
DVD		X R	307	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X R	308	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X R	309	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X R	310	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X R	311	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X R	314	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X R	315	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X R	317	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X R	318	SR-H47-01C-622	RES,4.7K-1/16W	a
DVD		X R	319	SR-H47-01C-622	RES,4.7K-1/16W	a
DVD		X R	320	SR-H47-01C-622	RES,4.7K-1/16W	a
DVD		X R	321	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X R	322	SR-H47-01C-622	RES,4.7K-1/16W	a
DVD		X R	323	SR-H00-00C-622	RES,0-1/16W	a
DVD		X R	350	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X R	351	SR-H10-00C-622	RES,100-1/16W	a
DVD		X R	352	SR-H10-00C-622	RES,100-1/16W	a
DVD		X R	353	SR-H10-00C-622	RES,100-1/16W	a
DVD		X R	354	SR-H10-00C-622	RES,100-1/16W	a

ELECTRICAL PARTS LIST -6/10

! = ⚠ SAFTY PARTS
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All components used on this model at the production line are shown in this service manual.
However, please note that not all components will be available as spare parts for after-sales service.
Components marked S and O are designated as spare parts for service and will be stocked at the spare parts centers.
Components marked X and R are not designated as spare parts for after sales service, and will not be stocked at the spare parts centers.

UNIT-NAME	!	C	REF-NO	PARTS-NO	PARTS-NAME	SUFFIX&MODEL
						XD-SPM823 UBC1
DVD		X	R 355	SR-H10-00C-622	RES,100-1/16W	a
DVD		X	R 356	SR-H10-00C-622	RES,100-1/16W	a
DVD		X	R 357	SR-H10-00C-622	RES,100-1/16W	a
DVD		X	R 358	SR-H10-00C-622	RES,100-1/16W	a
DVD		X	R 359	SR-H10-00C-622	RES,100-1/16W	a
DVD		X	R 360	SR-H10-00C-622	RES,100-1/16W	a
DVD		X	R 361	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 362	SR-H10-00C-622	RES,100-1/16W	a
DVD		X	R 363	SR-H10-00C-622	RES,100-1/16W	a
DVD		X	R 364	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 365	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 367	SR-H12-01C-622	RES,1.2K-1/16W	a
DVD		X	R 368	SR-H47-02C-622	RES,47K-1/16W	a
DVD		X	R 369	SR-H47-01C-622	RES,4.7K-1/16W	a
DVD		X	R 370	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X	R 3A2	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 3F1	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 3F2	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X	R 3F3	SR-H47-01C-622	RES,4.7K-1/16W	a
DVD		X	R 3F4	SR-H10-02C-622	RES,10K 1/16W	a
						XD-SPM823 UBC1
DVD		X	R 3F5	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X	R 401	SR-H01-82C-622	RES,18-1/16W	a
DVD		X	R 403	SR-H01-02C-622	RES,10-1/16W	a
DVD		X	R 404	SR-H75-01C-622	RES,7.5K-1/16W	a
DVD		X	R 405	SR-H18-01C-622	RES,1.8K-1/16W	a
DVD		X	R 406	SR-H18-01C-622	RES,1.8K-1/16W	a
DVD		X	R 407	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X	R 409	SR-H75-01C-622	RES,7.5K-1/16W	a
DVD		X	R 410	SR-H75-01C-622	RES,7.5K-1/16W	a
DVD		X	R 411	SR-H75-01C-622	RES,7.5K-1/16W	a
DVD		X	R 412	SR-H18-01C-622	RES,1.8K-1/16W	a
DVD		X	R 413	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X	R 414	SR-H56-01C-622	RES,5.6K-1/16W	a
DVD		X	R 415	SR-H47-01C-622	RES,4.7K-1/16W	a
DVD		X	R 416	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X	R 417	SR-H18-01C-622	RES,1.8K-1/16W	a
DVD		X	R 418	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X	R 419	SR-H33-00C-622	RES,330-1/16W	a
DVD		X	R 420	SR-H33-00C-622	RES,330-1/16W	a
DVD		X	R 421	SR-H00-00C-622	RES,0-1/16W	a
						XD-SPM823 UBC1
DVD		X	R 428	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 429	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 430	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 431	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X	R 432	SR-H00-00C-622	RES,0-1/16W	a
DVD		O	R 433	SR-H56-00C-622	C-RES,M 560-1/16W	a
DVD		O	R 434	SR-H56-00C-622	C-RES,M 560-1/16W	a
DVD		X	R 435	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X	R 436	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X	R 501	SR-H33-01C-622	C-RES,3.3K-1/16W	a
DVD		X	R 502	SR-H10-01C-622	RES,1K-1/16W	a
DVD		X	R 503	SR-H00-00C-622	RES,0-1/16W	a
DVD		O	R 504	SR-H15-00C-422	C-RES,M 150-1/16W	a
DVD		X	R 505	SR-H01-02C-622	RES,10-1/16W	a
DVD		O	R 506	SR-H10-01C-422	C-RES,M 1K-1/16W	a
DVD		X	R 507	SR-H11-00C-622	RES,110-1/16W	a
DVD		X	R 508	SR-H07-52C-622	RES,75-1/16W	a
DVD		X	R 509	SR-H11-00C-622	RES,110-1/16W	a
DVD		X	R 510	SR-H02-22C-622	RES,22-1/16W	a
DVD		X	R 514	SR-H02-22C-622	RES,22-1/16W	a
						XD-SPM823 UBC1
DVD		X	R 515	SR-H02-22C-622	RES,22-1/16W	a
DVD		X	R 516	SR-H10-00C-622	RES,100-1/16W	a
DVD		X	R 517	SR-H02-22C-622	RES,22-1/16W	a
DVD		X	R 518	SR-H02-22C-622	RES,22-1/16W	a
DVD		X	R 519	SR-H02-22C-622	RES,22-1/16W	a
DVD		X	R 520	SR-H02-22C-622	RES,22-1/16W	a
DVD		X	R 521	SR-H47-01C-622	RES,4.7K-1/16W	a
DVD		X	R 522	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X	R 523	SR-H47-01C-622	RES,4.7K-1/16W	a
DVD		X	R 524	SR-H10-01C-622	RES,1K-1/16W	a
DVD		O	R 525	SL-C02-330-02B	C-INDUCTOR,HB-1S1608-800JT	a
DVD		X	R 530	SR-H12-01C-622	RES,1.2K-1/16W	a
DVD		X	R 531	SR-H12-01C-622	RES,1.2K-1/16W	a
DVD		X	R 534	SR-H68-00C-622	RES,680-1/16W	a
DVD		X	R 535	SR-H12-01C-622	RES,1.2K-1/16W	a
DVD		X	R 541	SR-H10-02C-622	RES,10K 1/16W	a
DVD		X	R 588	SR-H07-52C-622	RES,75-1/16W	a
DVD		X	R 589	SR-H07-52C-622	RES,75-1/16W	a
DVD		X	R 590	SR-H07-52C-622	RES,75-1/16W	a
DVD		X	R 591	SR-H07-52C-622	RES,75-1/16W	a

ELECTRICAL PARTS LIST -7/10

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UNIT-NAME	!	C	REF-NO	PARTS-NO	PARTS-NAME	SUFFIX&MODEL
						XD-SPM823 UBC1
DVD		X	R 597	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 598	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 5A1	SR-H00-00C-622	RES,0-1/16W	a
DVD		X	R 5A3	SR-H00-00C-622	RES,0-1/16W	a
DVD		O	X 201	S2-02R-BM0-1A0	X'TAL,SMD HC-49/SM5H KONY CHI	a
DVD		O	X 501	S2-02R-BL0-1A0	X'TAL,HC-49/SM5H	a
FRONT		X	C 901	SC-N10-40K-948	CAP,0.1UF-50V	a
FRONT		X	C 905	SC-N68-10K-518	CAP,680P-50V	a
FRONT		O	C 907	SC-E47-63C-638	CAP,E 47U-6.3	a
FRONT		O	C 909	87-010-415-010	CAP,10M-50V	a
FRONT		X	C 910	SC-N10-40K-948	CAP,0.1UF-50V	a
FRONT		X	C 911	SC-N10-40K-948	CAP,0.1UF-50V	a
FRONT		O	C 912	SC-E47-63C-638	CAP,E 47U-6.3	a
FRONT		X	C 918	SC-N10-30F-678	CAP,0.01-16V	a
FRONT		O	DIG901	S3-02R-CV1-03B	DIGITRON VFD20-0703FN	a
FRONT		O	IC 901	SI-MCR-HY0-31B	IC,GMS81C2012-HI013	a
FRONT		O	L 901	87-005-208-080	COIL,100	a
FRONT		O	P 9301	S6-30R-FB1-0T0	CONNECTOR FFC/FPC	a
FRONT		O	P 9901	S6-30S-BC0-2H0	CONN,8 PIN	a
FRONT		X	R 908	SR-D82-01F-608	RES,8.2K-1/6W	a
						XD-SPM823 UBC1
FRONT		X	R 909	SR-D15-02F-608	RES,15K-1/6W	a
FRONT		X	R 910	SR-D27-02F-608	RES,27K-1/6W	a
FRONT		X	R 913	SR-D68-00F-608	RES,680-1/6W	a
FRONT		X	R 914	SR-D82-00F-608	RES,820-1/6W	a
FRONT		X	R 915	SR-D12-01F-608	RES,1.2K-1/6W	a
FRONT		X	R 916	SR-D15-01F-608	RES,1.5K-1/6W	a
FRONT		X	R 917	SR-D22-01F-608	RES,2.2K-1/6W	a
FRONT		X	R 918	SR-D33-01F-608	RES,3.3K-1/6W	a
FRONT		X	R 919	SR-D47-01F-608	RES,4.7K-1/6W	a
FRONT		X	R 920	SR-D82-01F-608	RES,8.2K-1/6W	a
FRONT		X	R 921	SR-D15-02F-608	RES,15K-1/6W	a
FRONT		X	R 922	SR-D27-02F-608	RES,27K-1/6W	a
FRONT		X	R 923	SR-D68-02F-608	RES,68K-1/6W	a
FRONT		X	R 925	SR-D10-02F-608	RES,10K-1/6W	a
FRONT		X	R 926	SR-D10-02F-608	RES,10K-1/6W	a
FRONT		X	R 933	SR-D33-00F-608	RES,330-1/6W	a
FRONT		X	R 939	SR-D22-00F-608	RES,220-1/6W	a
FRONT		X	R 944	SR-D10-02F-608	RES,10K-1/6W	a
FRONT		X	R 951	SR-D10-03F-608	RES,100K-1/6W	a
FRONT		X	R 952	SR-D10-03F-608	RES,100K-1/6W	a
						XD-SPM823 UBC1
FRONT		X	R 953	SR-D10-03F-608	RES,100K-1/6W	a
FRONT		X	R 954	SR-D10-03F-608	RES,100K-1/6W	a
FRONT		X	R 955	SR-D10-03F-608	RES,100K-1/6W	a
FRONT		X	R 956	SR-D10-03F-608	RES,100K-1/6W	a
FRONT		X	R 957	SR-D10-03F-608	RES,100K-1/6W	a
FRONT		X	R 958	SR-D10-03F-608	RES,100K-1/6W	a
FRONT		X	R 959	SR-D10-03F-608	RES,100K-1/6W	a
FRONT		X	R 960	SR-D10-03F-608	RES,100K-1/6W	a
FRONT		X	R 961	SR-D10-03F-608	RES,100K-1/6W	a
FRONT		X	R 969	SR-D10-03F-608	RES,100K-1/6W	a
FRONT		X	R 970	SR-D10-03F-608	RES,100K-1/6W	a
FRONT		X	R 971	SR-D10-03F-608	RES,100K-1/6W	a
FRONT		X	R 972	SR-D10-03F-608	RES,100K-1/6W	a
FRONT		X	R 973	SR-D10-03F-608	RES,100K-1/6W	a
FRONT		X	R 974	SR-D10-03F-608	RES,100K-1/6W	a
FRONT		X	R 975	SR-D10-03F-608	RES,100K-1/6W	a
FRONT		X	R 976	SR-D10-03F-608	RES,100K-1/6W	a
FRONT		X	R 977	SR-D10-03F-608	RES,100K-1/6W	a
FRONT		X	R 978	SR-D10-03F-608	RES,100K-1/6W	a
FRONT		X	R 979	SR-D10-03F-608	RES,100K-1/6W	a
						XD-SPM823 UBC1
FRONT		X	R 980	SR-D10-03F-608	RES,100K-1/6W	a
FRONT		X	R 981	SR-D10-03F-608	RES,100K-1/6W	a
FRONT		X	R 982	SR-D10-03F-608	RES,100K-1/6W	a
FRONT		X	R 983	SR-D10-03F-608	RES,100K-1/6W	a
FRONT		X	R 990	SR-D12-01F-608	RES,1.2K-1/6W	a
FRONT		X	R 991	SR-D10-01F-608	RES,1.0K-1/6W	a
FRONT		X	R 993	SR-D12-01F-608	RES,1.2K-1/6W	a
FRONT		X	R 994	SR-D12-01F-608	RES,1.2K-1/6W	a
FRONT		X	R 995	SR-D12-01F-608	RES,1.2K-1/6W	a
FRONT		O	RC 901	S7-12R-163-8GA	REMCON RECEIVER TSOP1838RF1	a
FRONT		O	SW 901	S5-562-82C-000	SW,SKQNQED ALPS 5MM	a
FRONT		O	SW 902	S5-562-82C-000	SW,SKQNQED ALPS 5MM	a
FRONT		O	SW 903	S5-562-82C-000	SW,SKQNQED ALPS 5MM	a
FRONT		O	SW 904	S5-562-82C-000	SW,SKQNQED ALPS 5MM	a
FRONT		O	SW 914	S5-562-82C-000	SW,SKQNQED ALPS 5MM	a
FRONT		O	SW 915	S5-562-82C-000	SW,SKQNQED ALPS 5MM	a
FRONT		O	SW 916	S5-562-82C-000	SW,SKQNQED ALPS 5MM	a
FRONT		O	SW 917	S5-562-82C-000	SW,SKQNQED ALPS 5MM	a
FRONT		O	SW 918	S5-562-82C-000	SW,SKQNQED ALPS 5MM	a
FRONT		O	SW 919	S5-562-82C-000	SW,SKQNQED ALPS 5MM	a

ELECTRICAL PARTS LIST -8/10

! = ⚠ SAFTY PARTS
C = Components marked
All components used on this model at the production line are shown in this service manual.
However, please note that not all components will be available as spare parts for after-sales service.
Components marked S and O are designated as spare parts for service and will be stocked at the spare parts centers.
Components marked X and R are not designated as spare parts for after sales service, and will not be stocked at the spare parts centers.

UNIT-NAME	!	C	REF-NO	PARTS-NO	PARTS-NAME	SUFFIX&MODEL
						XD-SPM823 UBC1
FRONT		O	SW 9A1	S6-00R-RB0-03A	SW,TACT 12V 50MA	a
FRONT		O	X 901	S2-12B-A30-04A	RESONATOR,CERAMIC CSTLS6M00G5	a
JACK		X	C 606	SC-N10-40K-948	CAP,0.1UF-50V	a
JACK		X	C 607	SC-N10-40K-948	CAP,0.1UF-50V	a
JACK		O	C 613	87-A10-205-080	CAP,E 470-6.3V	a
JACK		O	D 603	SD-S14-148-9BB	DIODE,1N4148	a
JACK		O	D 604	SD-S14-148-9BB	DIODE,1N4148	a
JACK		O	F 602	S2-00H-JC9-01A	SAM,FILTER CFI06B1H101MF	a
JACK		O	F 603	S2-00H-JC9-01A	SAM,FILTER CFI06B1H101MF	a
JACK		O	F 604	S2-00H-JC9-01A	SAM,FILTER CFI06B1H101MF	a
JACK		O	F 605	S2-00H-JC9-01A	SAM,FILTER CFI06B1H101MF	a
JACK		O	F 606	S2-00H-JC9-01A	SAM,FILTER CFI06B1H101MF	a
JACK		O	F 607	S2-00H-JC9-01A	SAM,FILTER CFI06B1H101MF	a
JACK		O	F 608	S2-00H-JC9-01A	SAM,FILTER CFI06B1H101MF	a
JACK		O	F 612	S2-00H-JC9-01A	SAM,FILTER CFI06B1H101MF	a
JACK		O	F 613	S2-00H-JC9-01A	SAM,FILTER CFI06B1H101MF	a
JACK		O	JK 601	S6-12R-L00-7A0	JACK,FIBER OPTIC GP1FA550TZ	a
JACK		O	JK 602	S6-12J-H00-3BB	JACK,RCA RCA/DIN-29G	a
JACK		O	L 603	87-003-097-080	COIL,1.0M 2.3-3.4-5	a
JACK		O	L 604	87-003-097-080	COIL,1.0M 2.3-3.4-5	a
						XD-SPM823 UBC1
JACK		O	P 6401	S6-30H-XD1-26A	F-CABLE,26P LG	a
JACK		O	Q 605	S3-1KR-A10-3M0	TR,KRA103M-TP	a
JACK		O	Q 606	S3-1KR-A10-3M0	TR,KRA103M-TP	a
JACK		O	Q 607	ST-R31-980-9AC	TR,KTC3198-TP-BL	a
JACK		O	Q 608	ST-R31-980-9AC	TR,KTC3198-TP-BL	a
JACK		O	Q 615	ST-R12-660-9AE	TR,KTA1266-GR-TP	a
JACK		X	R 605	SR-D10-01F-608	RES,1.0K-1/6W	a
JACK		X	R 606	SR-D10-01F-608	RES,1.0K-1/6W	a
JACK		X	R 607	SR-D10-01F-608	RES,1.0K-1/6W	a
JACK		X	R 608	SR-D10-01F-608	RES,1.0K-1/6W	a
JACK		X	R 609	SR-D10-01F-608	RES,1.0K-1/6W	a
JACK		X	R 618	SR-D10-03F-608	RES,100K-1/6W	a
JACK		X	R 619	SR-D10-03F-608	RES,100K-1/6W	a
JACK		X	R 622	SR-D02-22F-608	RES,22-1/6W	a
JACK		X	R 624	SR-D10-01F-608	RES,1.0K-1/6W	a
JACK		X	R 633	SR-D47-01F-608	RES,4.7K-1/6W	a
JACK		X	R 634	SR-D56-01F-608	RES,5.6K-1/6W	a
JACK		X	R 6M2	SR-D10-03F-608	RES,100K-1/6W	a
JACK		X	R 6M4	SR-D10-03F-608	RES,100K-1/6W	a
JACK		O	SW 602	S6-00R-SH1-8A0	SWITCH,TACT CSS-4206	a
						XD-SPM823 UBC1
JACK		O	ZD 605	SD-Z33-260-9FB	ZENER,GDZJ3.3B	a
JACK		O	ZD 606	SD-Z33-260-9FB	ZENER,GDZJ3.3B	a
JACK		O	ZD 611	SD-Z33-260-9FB	ZENER,GDZJ3.3B	a
JACK		O	ZD 612	SD-Z33-260-9FB	ZENER,GDZJ3.3B	a
JACK		O	ZD 635	SD-Z33-260-9FB	ZENER,GDZJ3.3B	a
JACK		O	ZD 636	SD-Z33-260-9FB	ZENER,GDZJ3.3B	a
JACK		O	ZD 637	SD-Z33-260-9FB	ZENER,GDZJ3.3B	a
JACK		O	ZD 638	SD-Z33-260-9FB	ZENER,GDZJ3.3B	a
JACK		O	ZD 641	SD-Z33-260-9FB	ZENER,GDZJ3.3B	a
JACK		O	ZD 642	SD-Z33-260-9FB	ZENER,GDZJ3.3B	a
JACK		O	ZD 643	SD-Z33-260-9FB	ZENER,GDZJ3.3B	a
JACK		O	ZD 644	SD-Z33-260-9FB	ZENER,GDZJ3.3B	a
KEY		X	C 919	SC-N10-30F-678	CAP,0.01-16V	a
KEY		O	C 920	SC-E10-63F-638	CAP,E 10-16V	a
KEY		O	C 921	SC-E47-63C-638	CAP,E 47U-6.3	a
KEY		O	IC 902	SI-KE7-042-00B	IC,KIA7042P	a
KEY		O	L 902	87-005-208-080	COIL,100	a
KEY		O	LED901	SD-L32-531-9AA	LED,SPR325MVWT31(GRN)	a
KEY		O	P 9902	S6-30S-BC0-1H0	CONN,8PIN	a
KEY		S	Q 901	ST-R10-300-9AE	TR,KRC103M	a
						XD-SPM823 UBC1
KEY		S	Q 902	ST-R10-300-9AE	TR,KRC103M	a
KEY		X	R 901	SR-D68-00F-608	RES,680-1/6W	a
KEY		X	R 902	SR-D82-00F-608	RES,820-1/6W	a
KEY		X	R 903	SR-D12-01F-608	RES,1.2K-1/6W	a
KEY		X	R 904	SR-D15-01F-608	RES,1.5K-1/6W	a
KEY		X	R 905	SR-D22-01F-608	RES,2.2K-1/6W	a
KEY		X	R 906	SR-D33-01F-608	RES,3.3K-1/6W	a
KEY		X	R 907	SR-D47-01F-608	RES,4.7K-1/6W	a
KEY		X	R 938	SR-D10-01F-608	RES,1.0K-1/6W	a
KEY		X	R 996	SR-D33-01F-608	RES,3.3K-1/6W	a
KEY		O	SW 905	S5-562-82C-000	SW,SKQNQED ALPS 5MM	a
KEY		O	SW 906	S5-562-82C-000	SW,SKQNQED ALPS 5MM	a
KEY		O	SW 907	S5-562-82C-000	SW,SKQNQED ALPS 5MM	a
KEY		O	SW 908	S5-562-82C-000	SW,SKQNQED ALPS 5MM	a
KEY		O	SW 909	S5-562-82C-000	SW,SKQNQED ALPS 5MM	a
KEY		O	SW 910	S5-562-82C-000	SW,SKQNQED ALPS 5MM	a
KEY		O	SW 911	S5-562-82C-000	SW,SKQNQED ALPS 5MM	a
KEY		O	SW 912	S5-562-82C-000	SW,SKQNQED ALPS 5MM	a
KEY		O	SW 913	S5-562-82C-000	SW,SKQNQED ALPS 5MM	a
POWER		O	BC 101	S6-360-04C-000	COIL,BFS3550R2FD8	a

ELECTRICAL PARTS LIST -9/10

! = ⚠ SAFTY PARTS
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All components used on this model at the production line are shown in this service manual.
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Components marked X and R are not designated as spare parts for after sales service, and will not be stocked at the spare parts centers.

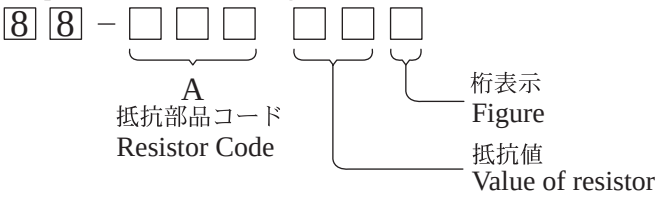
UNIT-NAME	!	C	REF-NO	PARTS-NO	PARTS-NAME	SUFFIX&MODEL
						XD-SPM823 UBC1
POWER		O	BD 101	87-070-173-010	S1WBA60	a
POWER	!	O	C 101	S6-240-88N-000	CAP,MPX104K 275VAC	a
POWER	!	O	C 102	S6-240-88N-000	CAP,MPX104K 275VAC	a
POWER	!	O	C 103	SC-E15-7CR-610	CAP,E 150UF-250V	a
POWER		O	C 104	87-010-408-040	CAP,E 47UF-50V	a
POWER		O	C 109	SC-E10-86F-6CM	CAP,E 1000UF-16V	a
POWER		X	C 110	SC-N47-30K-948	CAP,0.047-50V	a
POWER		O	C 112	87-010-375-080	CAP,E 330-10V	a
POWER		O	C 113	87-012-379-010	CAP,3300PF-400V	a
POWER		O	C 115	87-010-415-010	CAP,E 10M-50V	a
POWER		O	C 116	87-016-134-080	CAP,E 470UF-25V M FM	a
POWER		X	C 117	SC-N47-30K-948	CAP,0.047-50V	a
POWER		O	C 118	87-010-060-080	CAP,E 100-16V	a
POWER	!	O	C 119	S6-240-87B-000	CAP,100P-1KV	a
POWER		O	C 120	87-010-060-080	CAP,E 100-16V	a
POWER		O	C 121	SC-E22-76F-638	CAP,E 220UF-16V	a
POWER		O	C 122	87-010-408-040	CAP,E 47UF-50V	a
POWER		O	C 123	SC-E10-86F-6CM	CAP,E 1000UF-16V	a
POWER		O	C 124	SC-E33-7CH-618	CAP,E 330UF-25V	a
POWER	!	O	C 126	87-016-375-010	CAP,0.01UF-630V	a
						XD-SPM823 UBC1
POWER		X	C 128	SC-Q10-42K-409	CAP,0.1UF-50V	a
POWER		O	C 129	87-010-060-080	CAP,E 100-16V	a
POWER		O	C 130	87-016-088-040	CAP,E 220-6.3V	a
POWER		O	C 131	87-010-060-080	CAP,E 100-16V	a
POWER		O	C 137	87-010-375-080	CAP,E 330-10V	a
POWER		O	C 138	87-015-695-080	CAP,E 1.0-50V	a
POWER		O	D 100	87-357-529-310	DIODE,ERA22-10	a
POWER		O	D 102	SD-R15-822-0AA	DIODE,1N5822	a
POWER		O	D 103	87-017-352-010	DIODE,RU3YXLF-C1 100V2	a
POWER		S	D 104	SD-D01-000-9AC	DIODE,EU01W	a
POWER		O	D 106	SD-R10-400-9AB	DIODE,RL104	a
POWER		S	D 107	SD-D01-000-9AC	DIODE,EU01W	a
POWER		S	D 108	SD-D01-000-9AC	DIODE,EU01W	a
POWER		O	D 109	SD-R20-200-0AB	DIODE,HER202 BK	a
POWER		S	D 110	SD-D01-000-9AC	DIODE,EU01W	a
POWER		O	D 111	SD-RRE-000-29A	DIODE,1N17	a
POWER	!	O	F 101	S5-850-27B-000	FUSE,1600MA 250V	a
POWER	!	O	F 102	87-001-196-080	ICP-N10	a
POWER	!	O	IC 101	SI-PMG-FA0-24A	IC,KA5M0265R-YDTU	a
POWER	!	O	IC 102	S2-309-024-040	SENSORLTV-817B PHOTO COU	a
						XD-SPM823 UBC1
POWER		O	IC 103	SI-KE7-812-00S	IC,KIA78R12PI	a
POWER		O	IC 104	SI-KE4-310-00A	IC,KIA431 3P	a
POWER		S	IC 105	SI-PMG-FA0-16A	IC,KA78R08TSTU	a
POWER		S	IC 106	SI-PMG-FA0-15A	IC,KA78R33TSTU	a
POWER		S	IC 107	SI-PMG-FA0-15A	IC,KA78R33TSTU	a
POWER	!	O	L 101	S6-161-45M-000	FILTER(CIRC) V-04350 LS	a
POWER		O	L 102	S6-330-88D-000	COIL,20UH	a
POWER		O	L 103	S6-330-88G-000	COIL,CHOCK TP 5MM	a
POWER		O	L 105	S6-330-88G-000	COIL,CHOCK TP 5MM	a
POWER		O	P 1301	S6-360-2W0-000	CONN ASSY,10P-160MM	a
POWER		O	P 1302	S6-31R-E00-9C0	CONN ASSY,9P	a
POWER	!	O	PW 101	S5-612-92B-000	GP390 LGC 3P STRAIG P	a
POWER		O	Q 107	ST-R12-730-9AA	TR,KTA1273-TP-Y	a
POWER		O	Q 108	ST-R31-980-9AC	TR,KTC3198-TP-BL	a
POWER	!	O	R 101	S6-140-07A-000	RES,CEM 2.7/2W	a
POWER		X	R 102	SR-D22-03F-608	RES,220K-1/6W	a
POWER		O	R 103	SR-S56-02K-619	RES,56K-2W	a
POWER		X	R 104	SR-D22-03F-608	RES,220K-1/6W	a
POWER		X	R 112	SR-D03-91F-608	RES,3.9-1/6W	a
POWER		X	R 114	SR-D10-03F-608	RES,100K-1/6W	a
						XD-SPM823 UBC1
POWER		X	R 120	SR-D47-02F-608	RES,47K-1/6W	a
POWER		X	R 121	SR-D12-01F-608	RES,1.2K-1/6W	a
POWER		X	R 122	SR-D22-00F-608	RES,220-1/6W	a
POWER		X	R 123	SR-D10-01F-608	RES,1.0K-1/6W	a
POWER		X	R 124	SR-D18-00F-608	RES,180-1/6W	a
POWER		X	R 125	SR-D39-01F-608	RES,3.9K-1/6W	a
POWER		X	R 126	SR-D10-01F-608	RES,1.0K-1/6W	a
POWER		X	R 127	SR-N36-01E-408	RES,3.6K-1/8W	a
POWER		X	R 128	SR-N33-01E-408	RES,3.3K-1/8W	a
POWER		X	R 130	SR-D10-02F-608	RES,10K-1/6W	a
POWER		X	R 140	SR-D10-01F-608	RES,1.0K-1/6W	a
POWER		X	R 141	SR-D10-01F-608	RES,1.0K-1/6W	a
POWER		X	R 142	SR-D10-01F-608	RES,1.0K-1/6W	a
POWER		X	R 145	SR-D47-00F-608	RES,470-1/6W	a
POWER	!	O	T 101	S4-202-4E0-000	TRANSFORMER,SMPS[COIL] SJE-02	a
POWER		S	ZD 101	SD-Z56-000-9CJ	ZENER,GDZJ5.6B	a

ELECTRICAL PARTS LIST -10/10

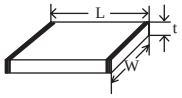
- Regarding connectors, they are not stocked as they are not the initial order items.
  The connectors are available after they are supplied from connector manufacturers upon the order is received.

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

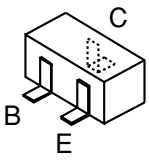
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



チップ抵抗
Chip resistor

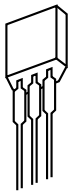
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード ：A Resistor Code：A
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION -1/1



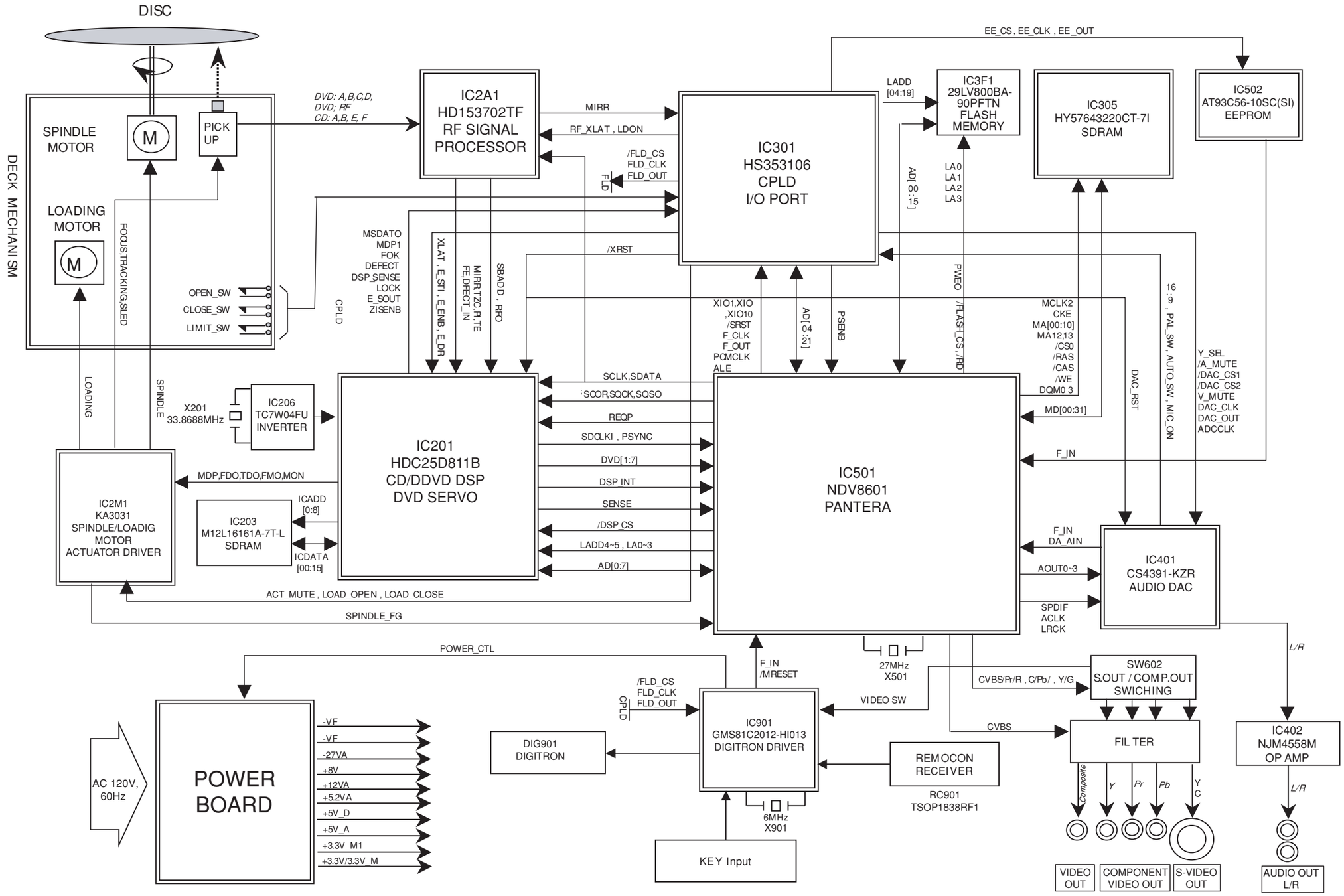
2SA1037K
DTC124EK
KTC3882

KTC3198

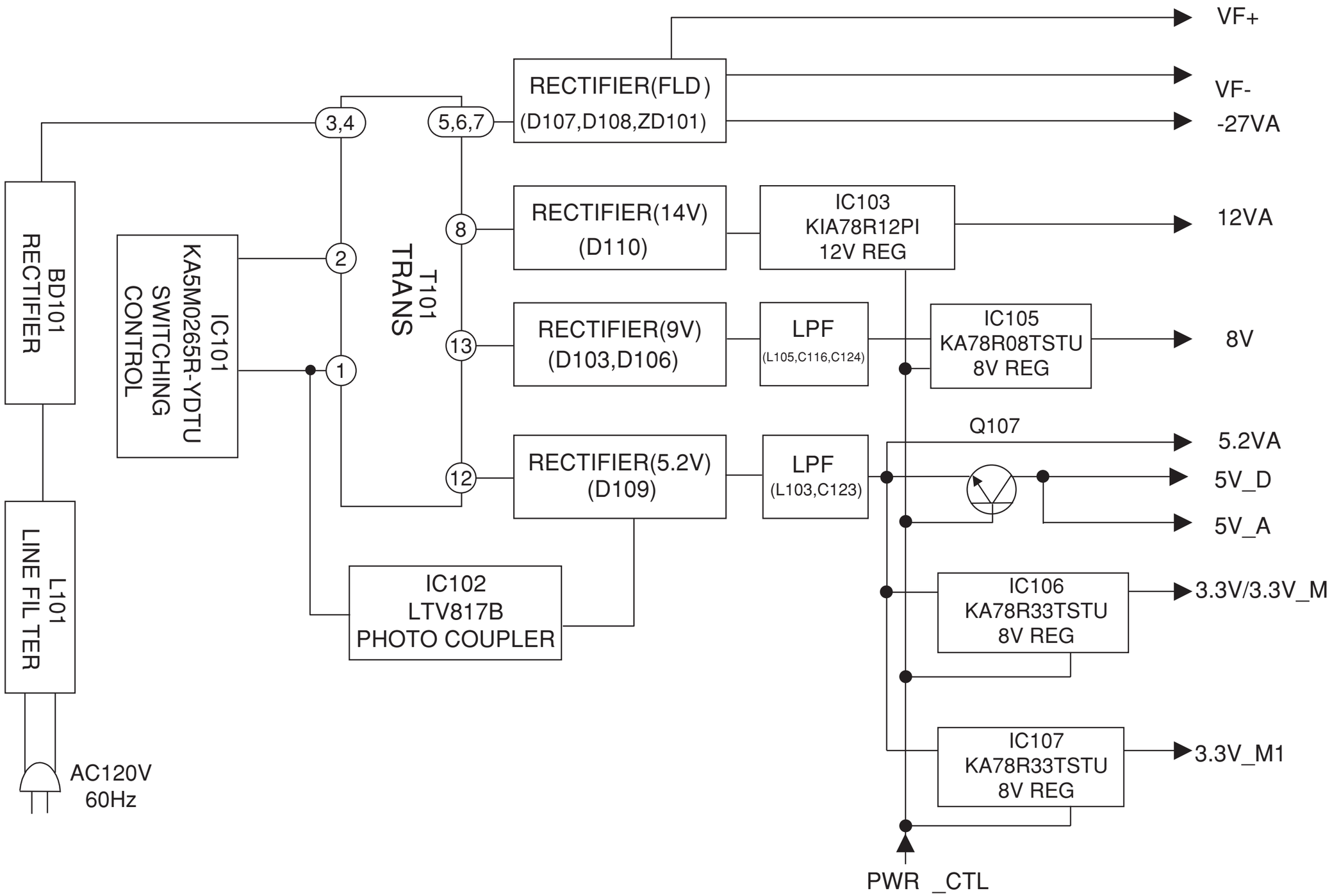


KRA103M
KRC103M
KTA1266
KTA1273

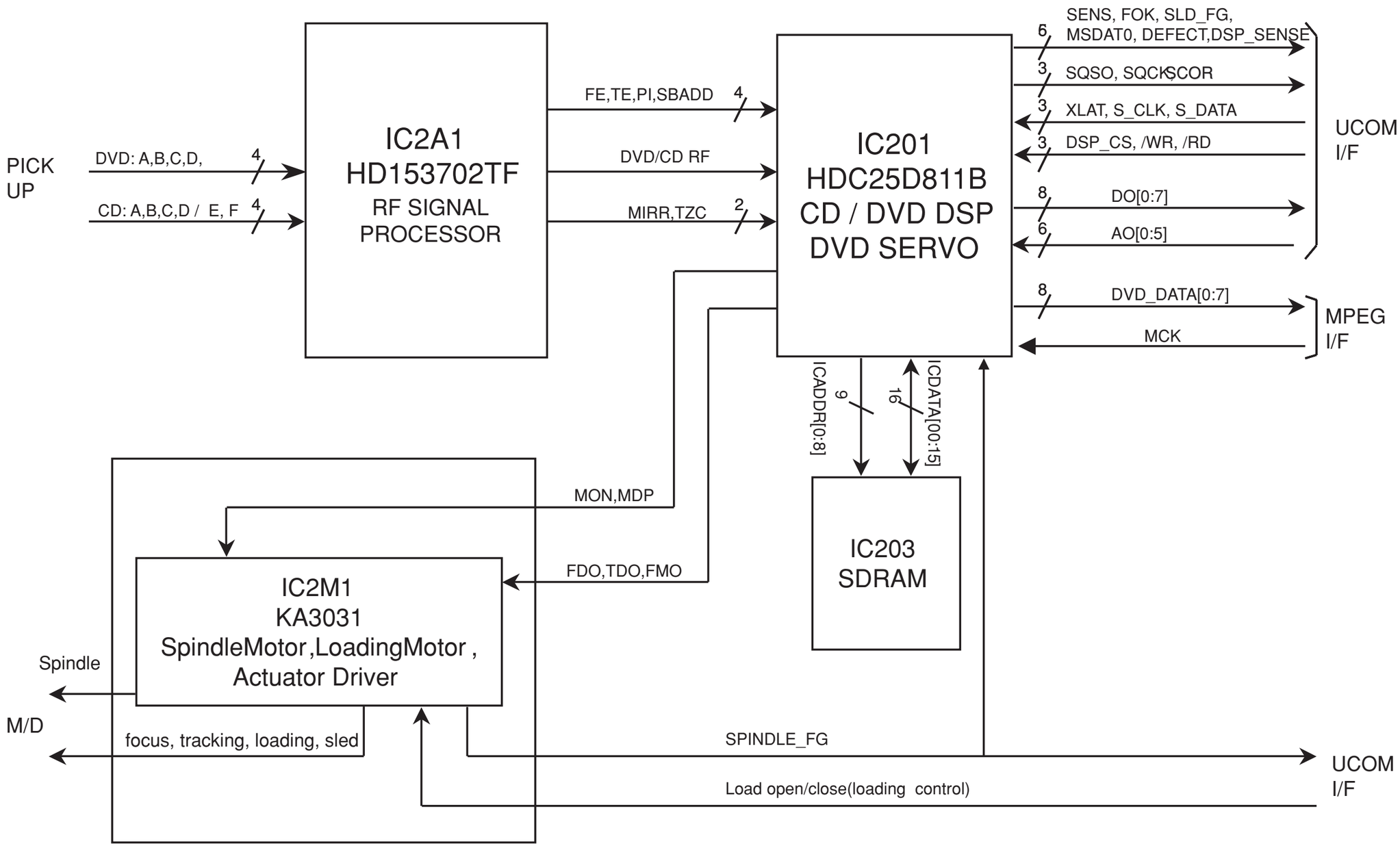
BLOCK DIAGRAM -1/4 (OVERALL SECTION)

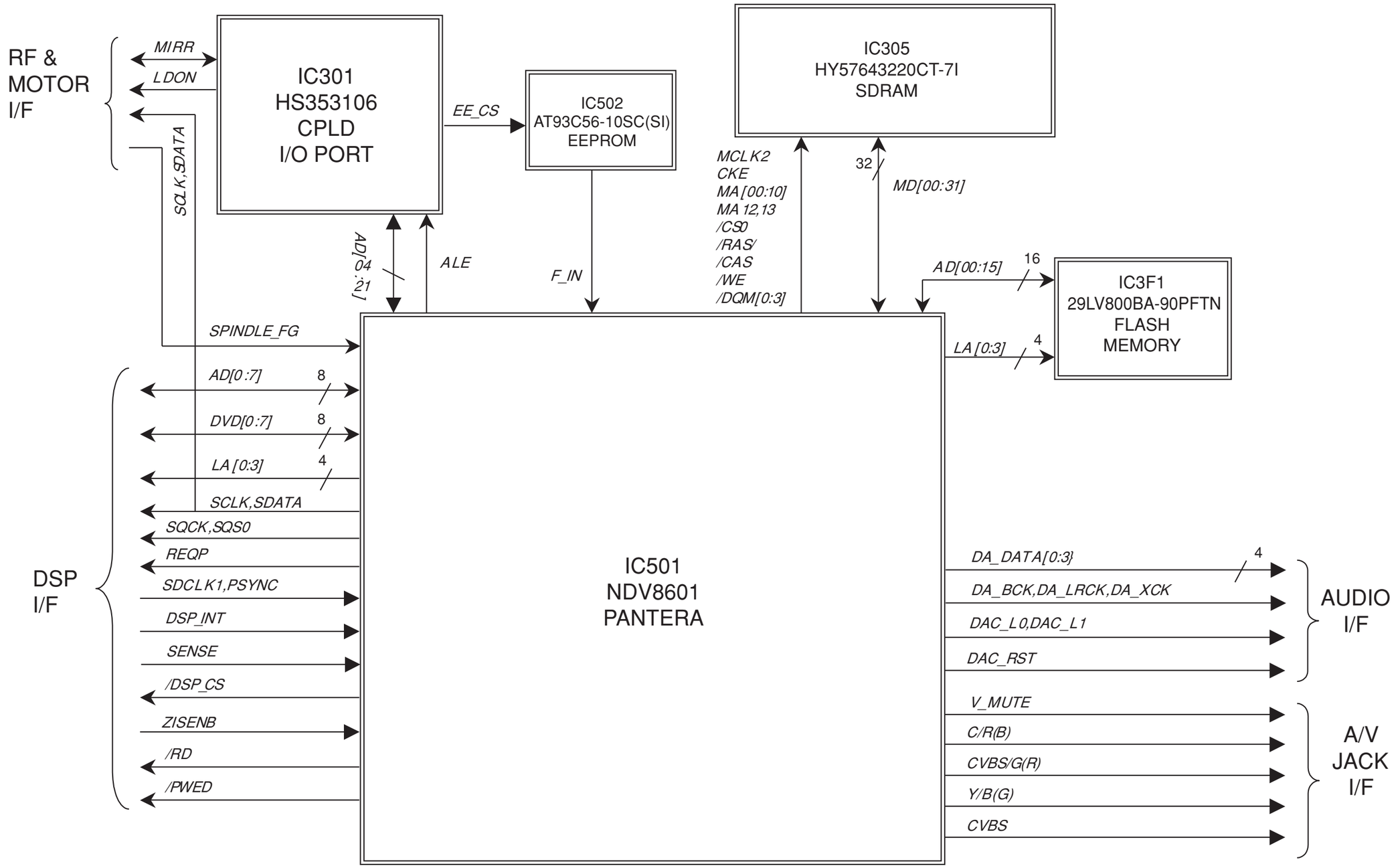


BLOCK DIAGRAM -2/4 (POWER SECTION)



BLOCK DIAGRAM -3/4 (RF/CD, DSP/DVD SECTION)




RF &
MOTOR
I/F
MIRR
LDON
IC301
HS353106
CPLD
I/O PORT
EE_CS
IC502
AT93C56-10SC(SI)
EEPROM
IC305
HY57643220CT-7I
SDRAM
SQLK,SDATA
AD[04 :21]
ALE
F_IN
MCLK2
CKE
MA[00:10]
MA 12,13
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/RAS/
/CAS
/WE
/DQM[0:3]
32
MD[00:31]
AD[00:15]
16
IC3F1
29LV800BA-90PFTN
FLASH
MEMORY
SPINDLE_FG
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8
DVD[0:7]
8
LA [0:3]
4
LA [0:3]
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SCLK,SDATA
SQCK,SQS0
REQP
SDCLK1,PSYNC
DSP_INT
SENSE
/DSP_CS
ZISENB
/RD
/PWED
DSP
I/F
IC501
NDV8601
PANTERA
DA_DATA[0:3]
4
DA_BCK,DA_LRCK,DA_XCK
DAC_L0,DAC_L1
DAC_RST
AUDIO
I/F
V_MUTE
C/R(B)
CVBS/G(R)
Y/B(G)
CVBS
A/V
JACK
I/F

DVD-1/5 C.B

IC201
HDC25D811B
CD/DVD DSP
DVD SERVO

IC203
M12L16161A-7T-L
SDRAM

L201,L203,L206-L208
HB : HB-1M2012-102JT

IC2A2
NJM3414AM-TE1

IC206
TC7W04FU
INVERTER

X201
33.8688MH
6202R-BM01A

Focus Servo Loop
Tracking Servo Loop
Sled Servo Loop
Spindle Servo Loop
RF SIGNAL
WAVEFORM

To DVD-4/5 (MEMORY SECTION) 1,4,5,10

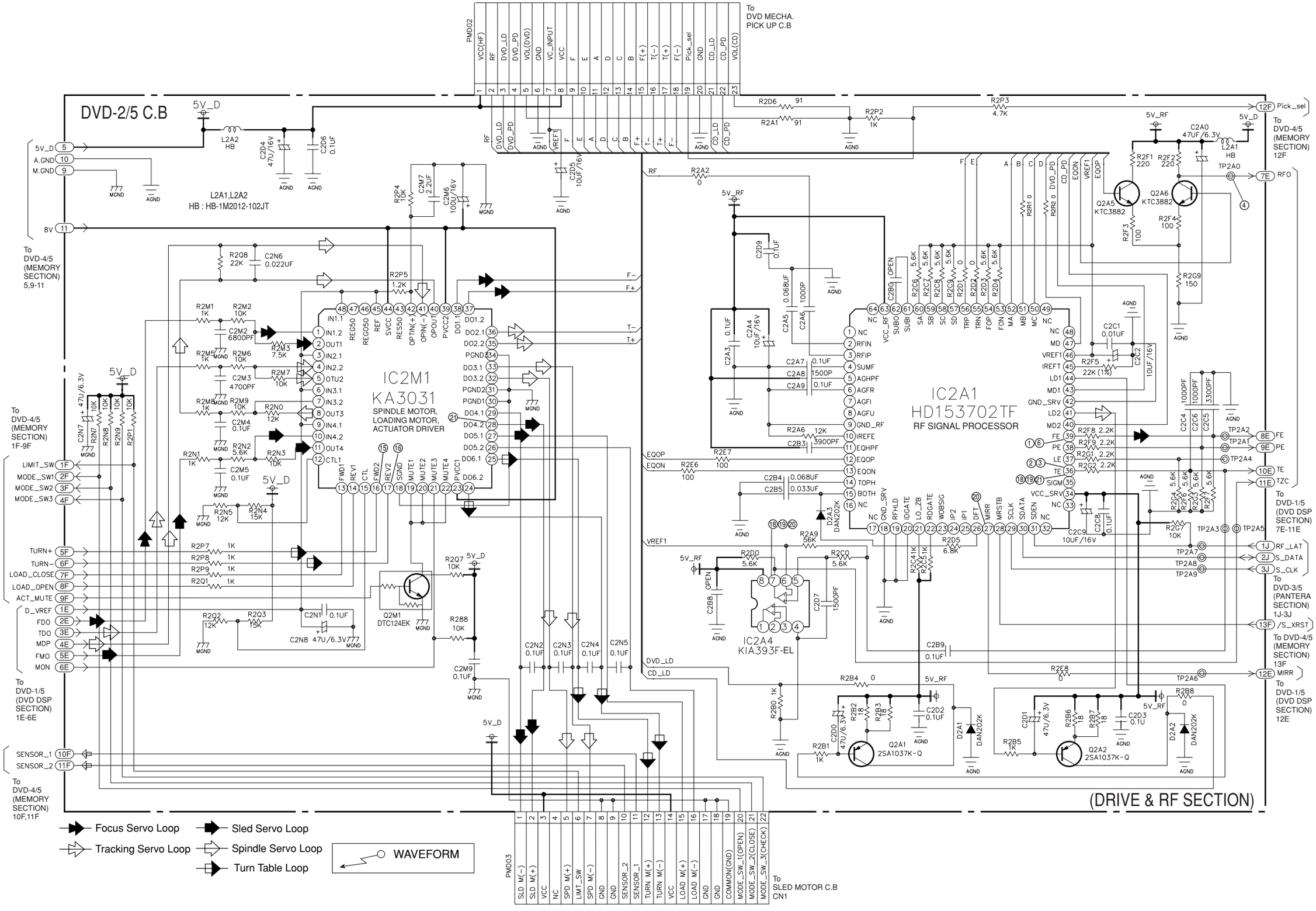
To DVD-3/5 (PANTERA SECTION) 1D-23D,AD0-AD7,DVD0-DVD7

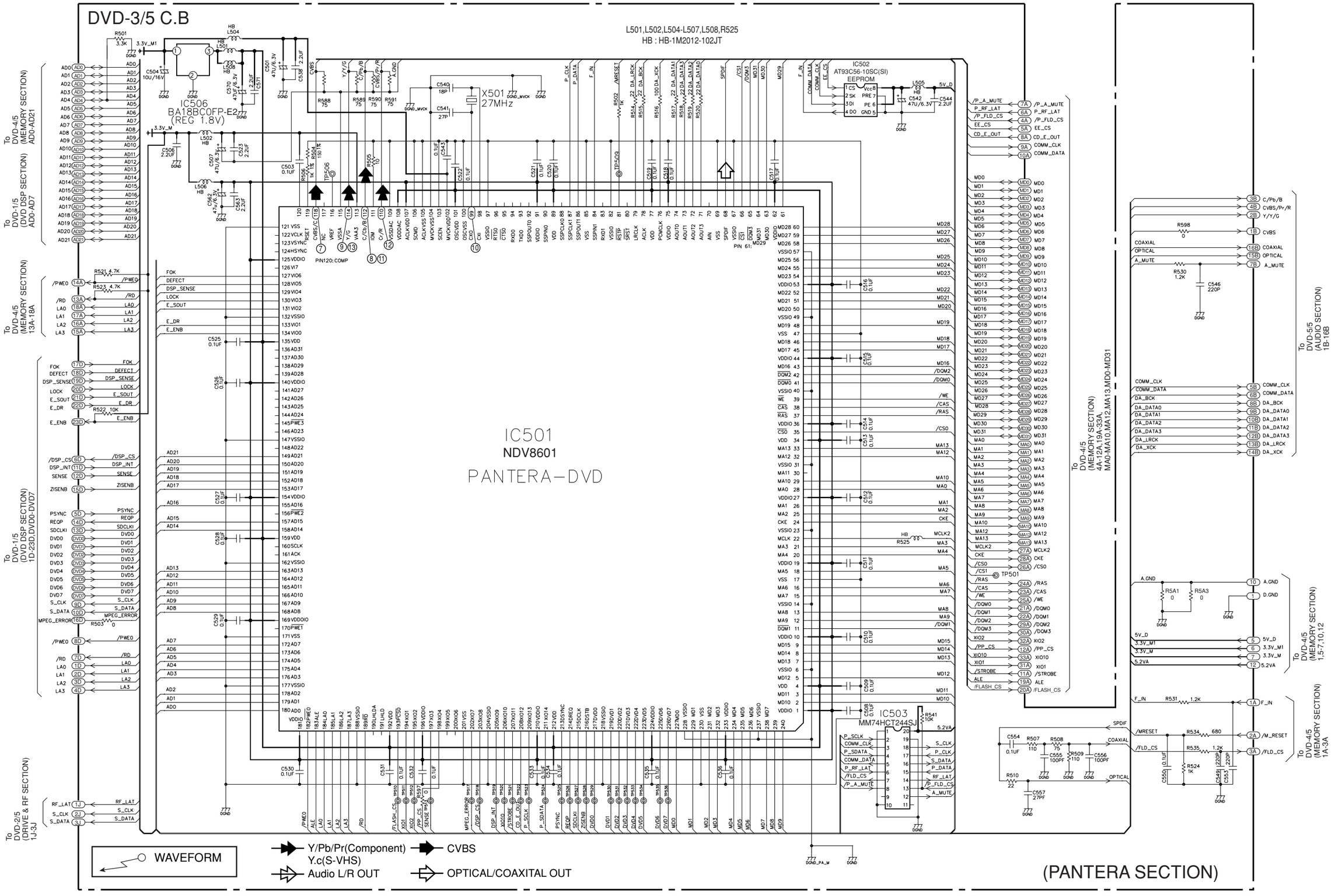
To DVD-4/5 (MEMORY SECTION) 1H-5H

To DVD-2/5 (DRIVE & RF SECTION) 1E-12E

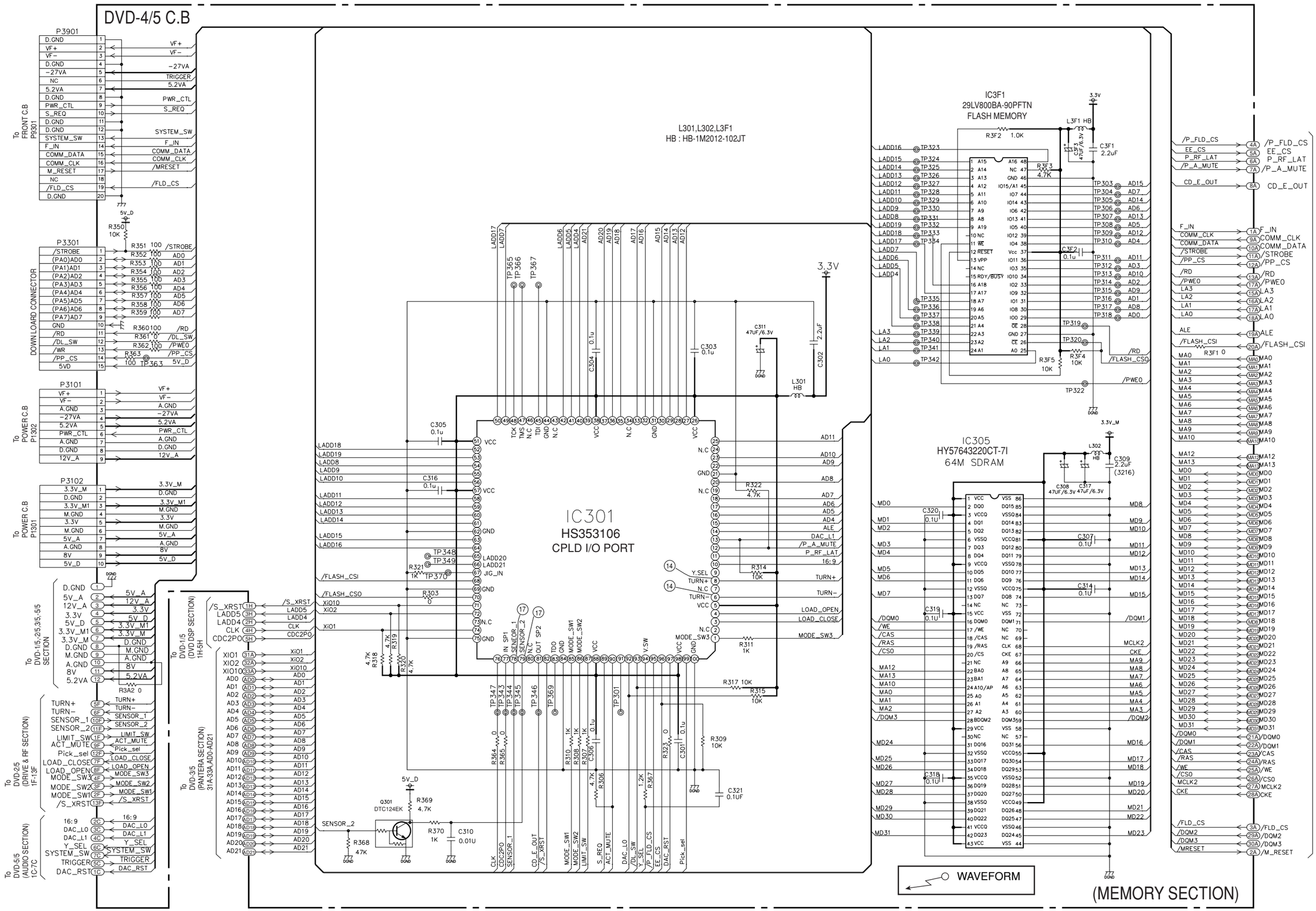
(DVD DSP SECTION)

SCHEMATIC DIAGRAM -2/8 (DRIVE & RF SECTION)

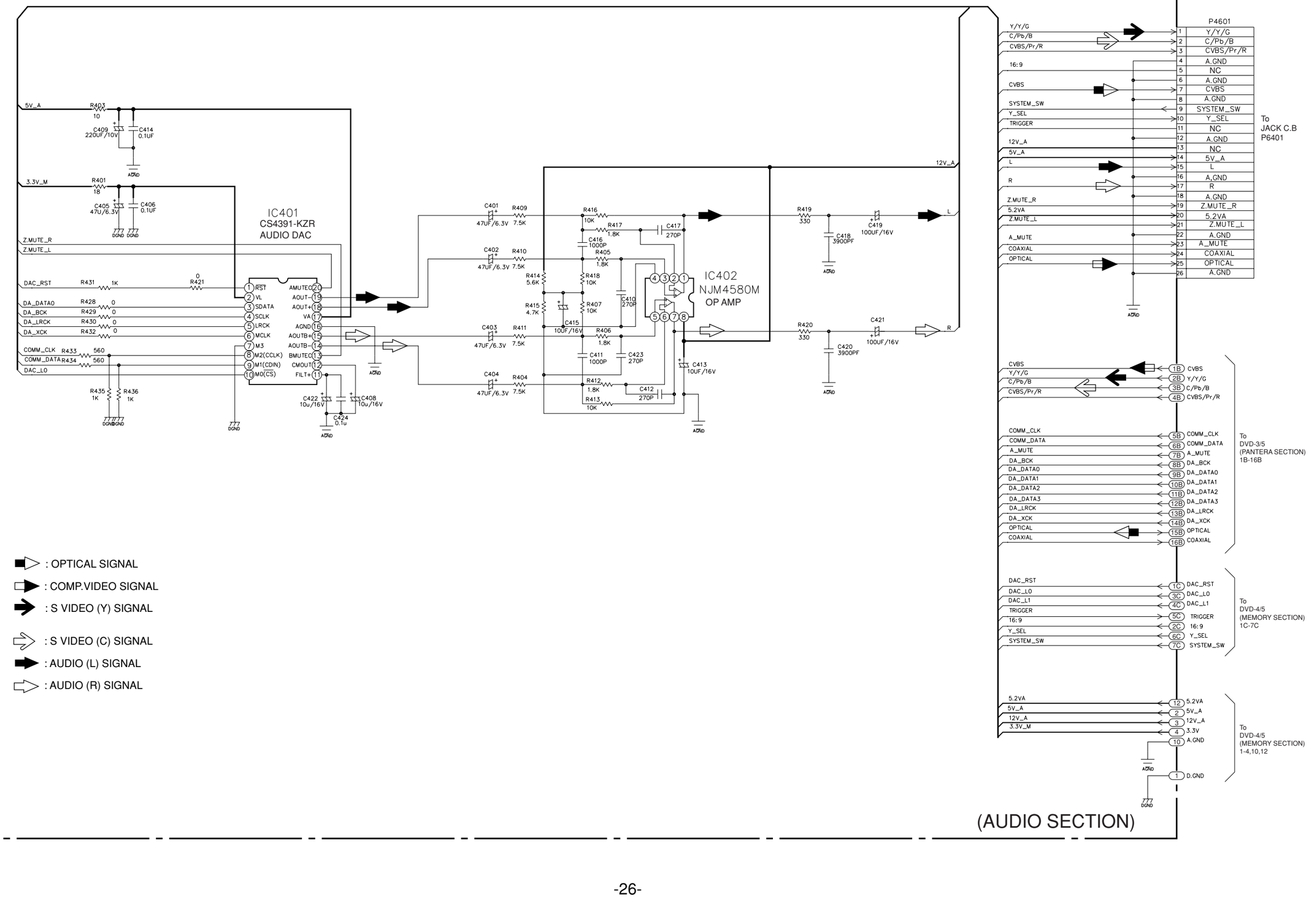



DVD-3/5 C.B
L501,L502,L504-L507,L508,R525
HB : HB-1M2012-102JT
IC506
BA18BC0FP-E2
(REG 1.8V)
X501
27MHz
IC502
AT93C56-10SC(SI)
EEPROM
IC501
NDV8601
PANTERA-DVD
IC503
MM74HCT244SJ
TP506
TP509
TP501
PIN120: COMP
PIN 61: MD29
To DVD-4/5 (MEMORY SECTION) AD0-AD21
To DVD-1/5 (DVD DSP SECTION) AD0-AD7
To DVD-4/5 (MEMORY SECTION) 13A-18A
To DVD-1/5 (DVD DSP SECTION) 1D-23D,DVD0-DVD7
To DVD-2/5 (DRIVE & RF SECTION) 1J-3J
To DVD-4/5 (MEMORY SECTION) 4A-12A,19A-33A, MA0-MA10,MA12,MA13,MD0-MD31
To DVD-5/5 (AUDIO SECTION) 1B-16B
To DVD-4/5 (MEMORY SECTION) 1,5-7,10,12
To DVD-4/5 (MEMORY SECTION) 1A-3A
WAVEFORM
Y/Pb/Pr(Component)
Y.c(S-VHS)
CVBS
Audio L/R OUT
OPTICAL/COAXITAL OUT
(PANTERA SECTION)

SCHEMATIC DIAGRAM -4/8 (MEMORY SECTION)



DVD-/5/5 C.B



(AUDIO SECTION)

WIRING -1/6 (DVD C.B) -Top View-

DVD C.B -Top View-

To
JACK C.B
P6401

To
DVD MECHA.
PICK UP C.B

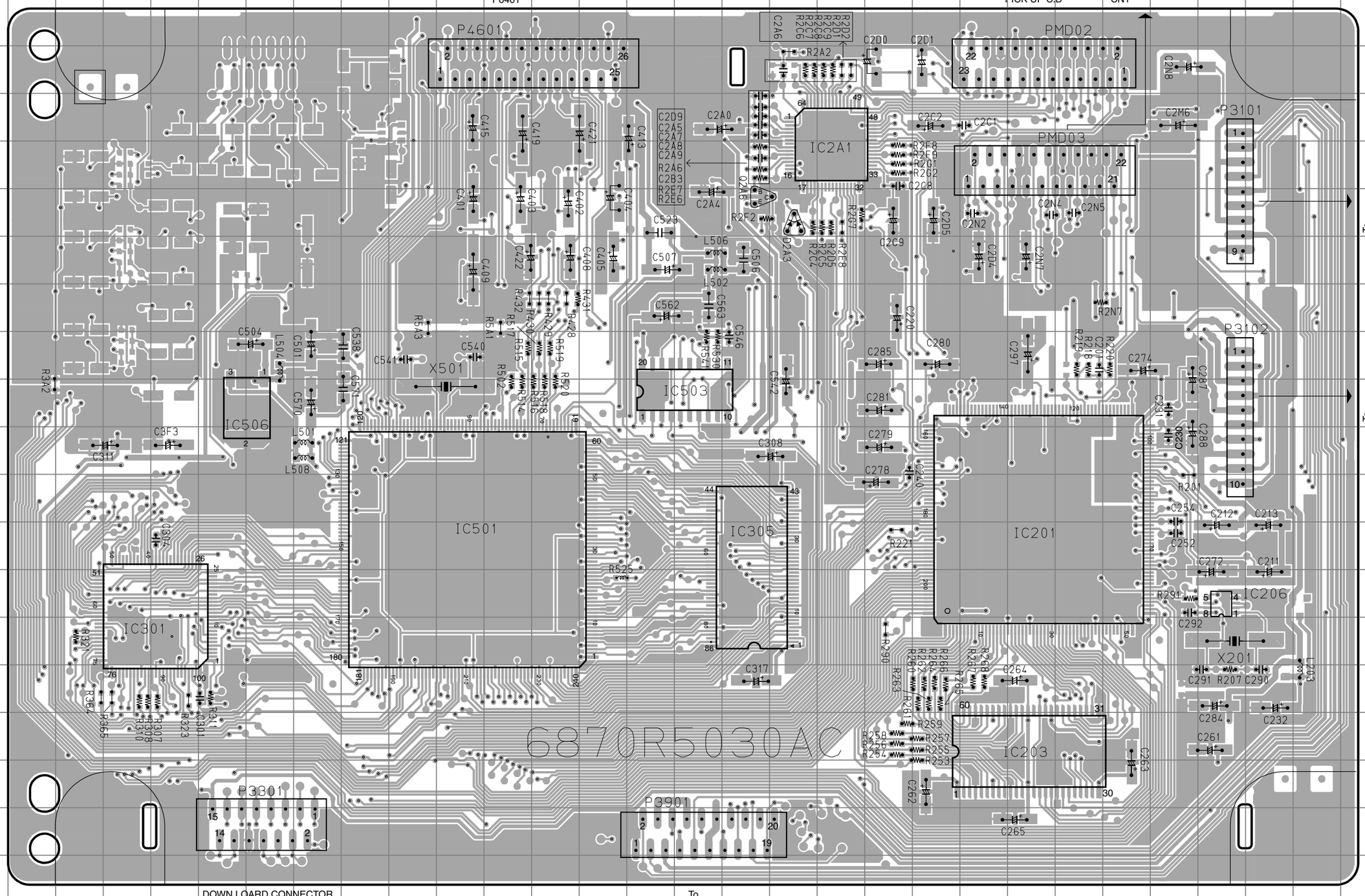
To
SLED MOTOR C.B
CN1

To
POWER C.B
P1302

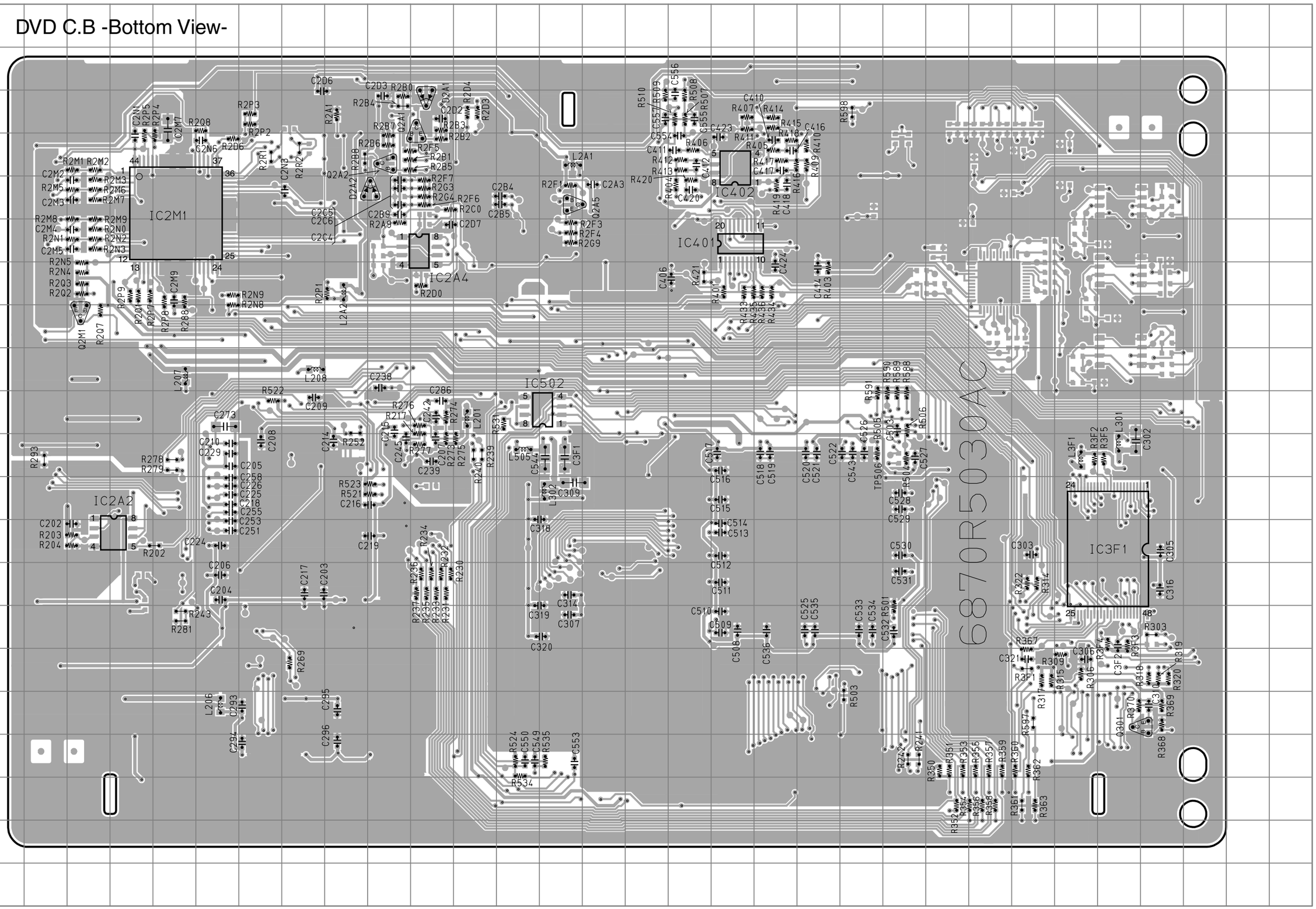
To
POWER C.B
P1301

DOWN LOARD CONNECTOR

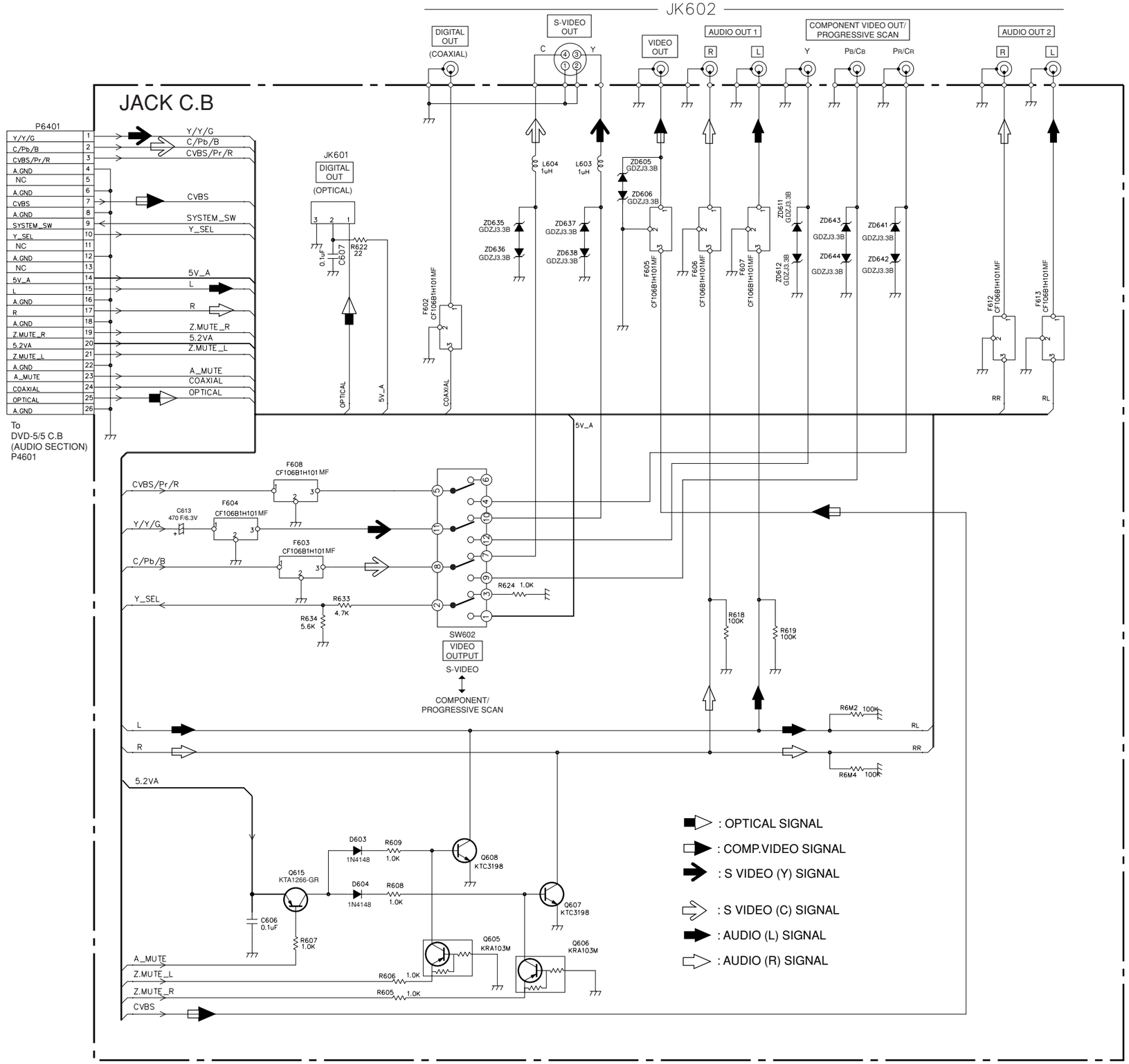
To
FRONT C.B
P3901



DVD C.B -Bottom View-



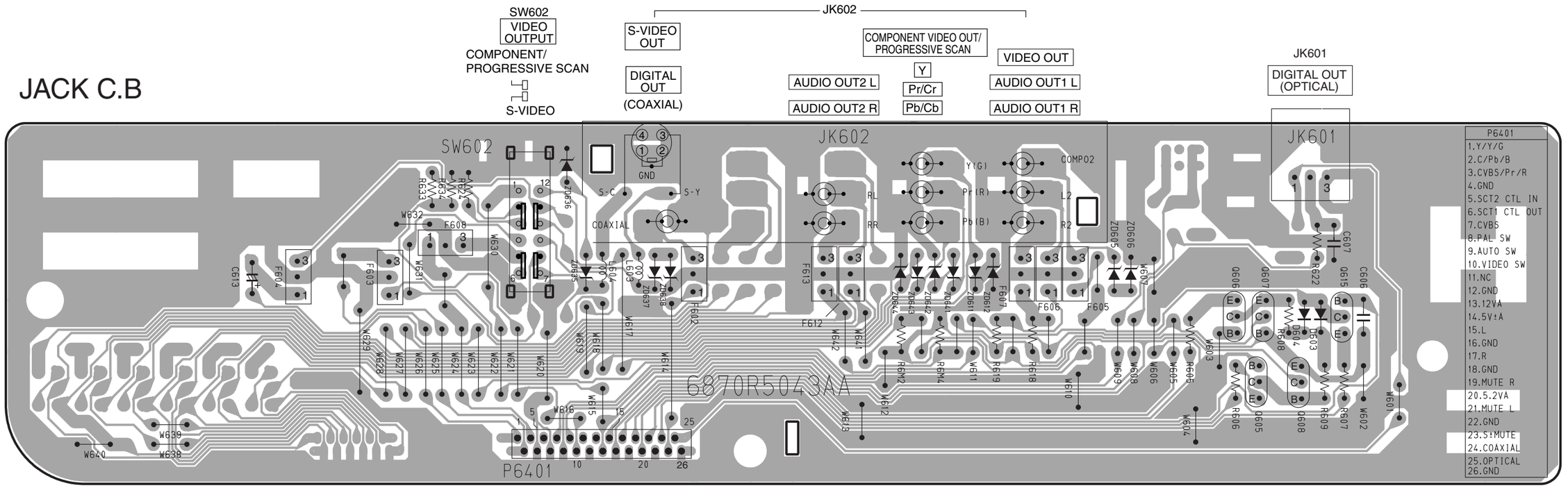
SCHEMATIC DIAGRAM -6/8 (JACK SECTION)



32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

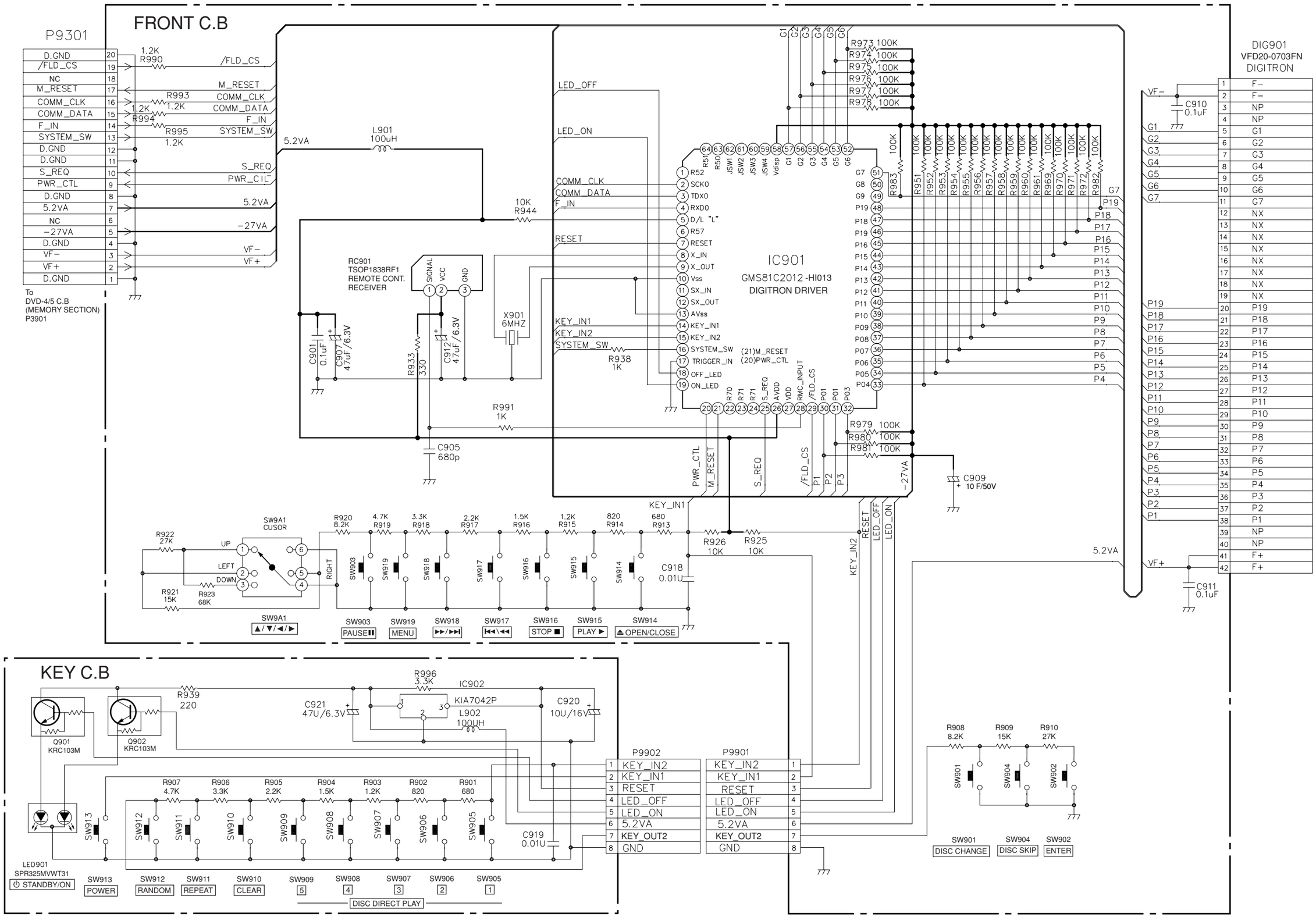
A B C D E F G H I J K L M N O P Q R S T U

JACK C.B

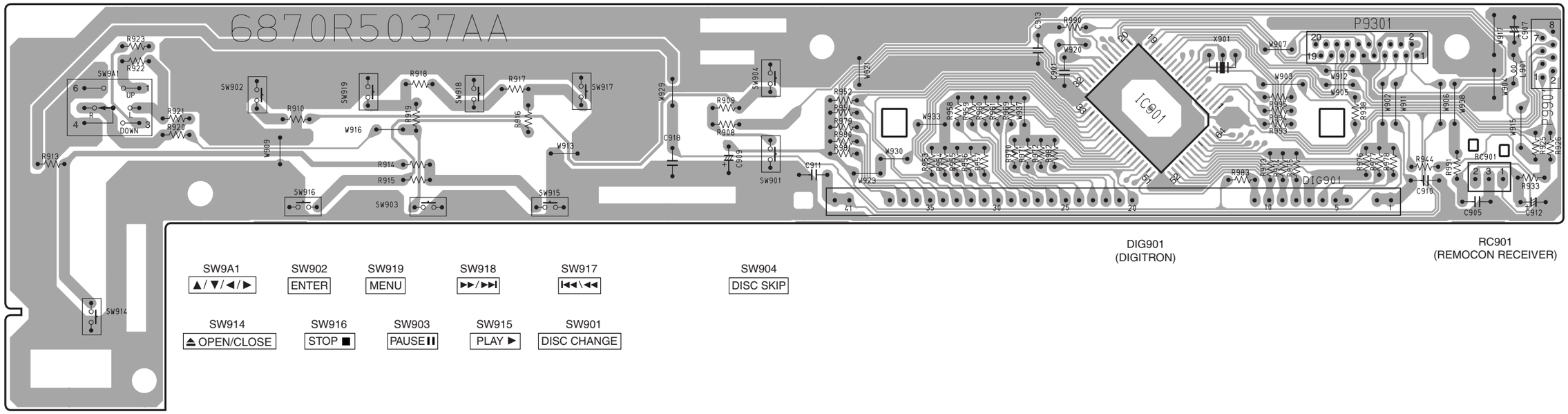


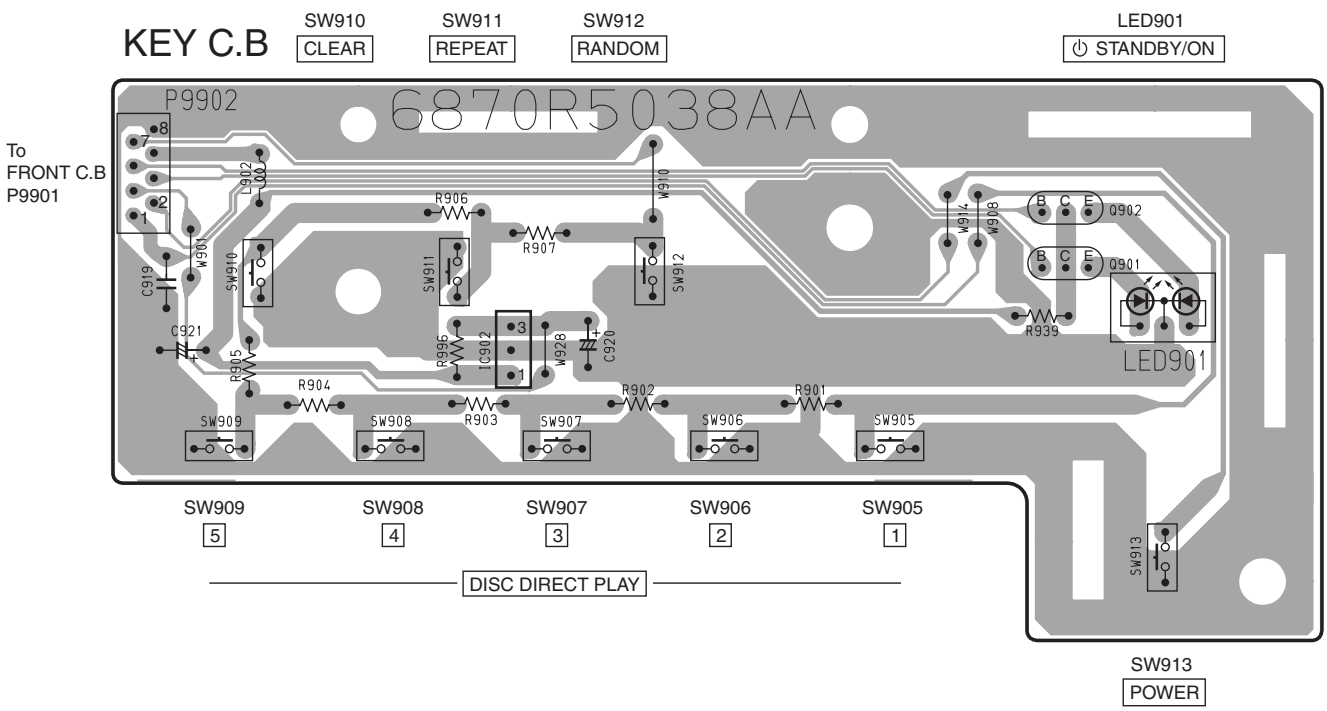
To
DVD C.B
P4601

SCHEMATIC DIAGRAM -7/8 (FRONT, KEY SECTION)

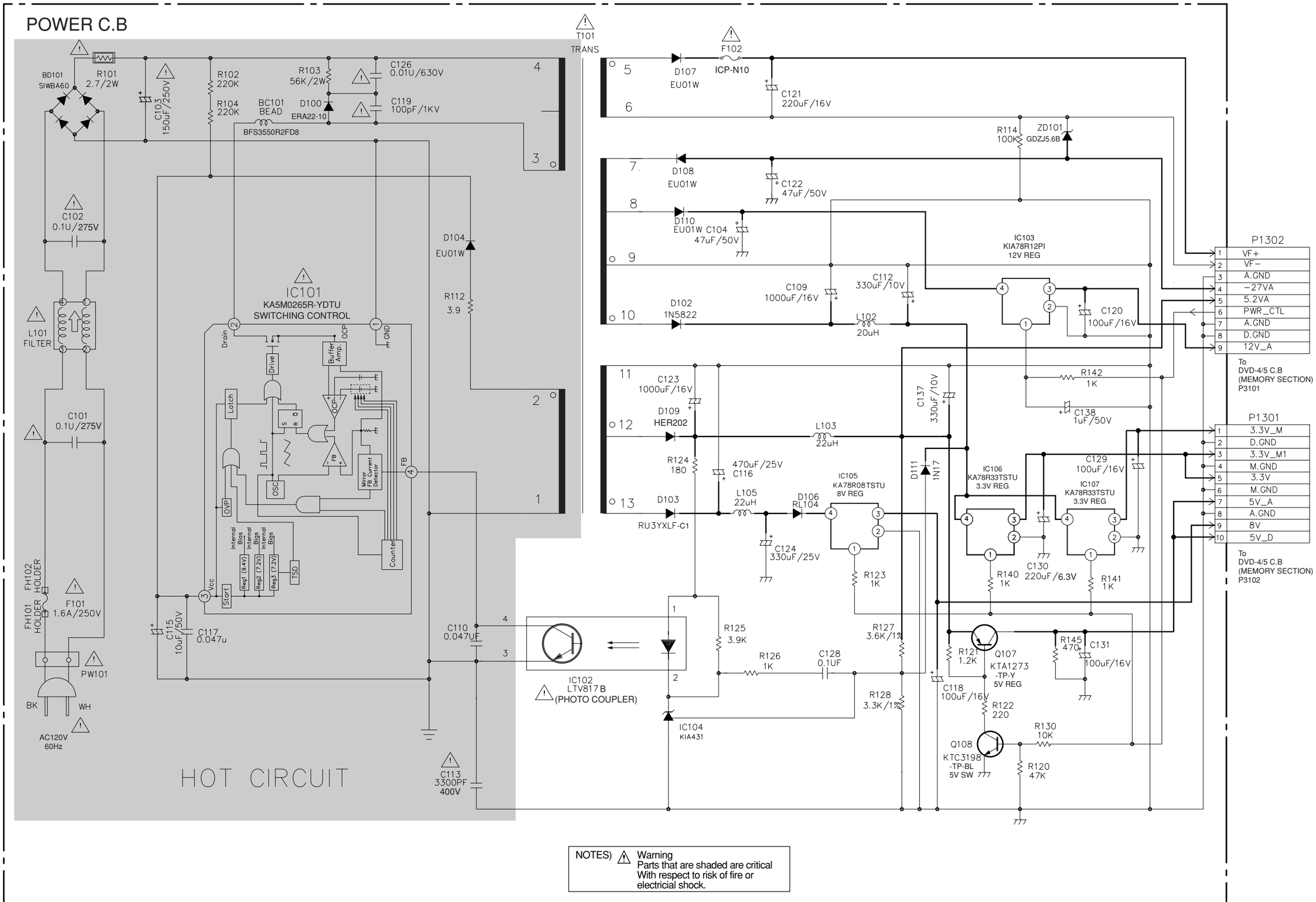


FRONT C.B


6870R5037AA
To
DVD C.B
P3901
To
KEY C.B
P9902
P9301
P9901
IC901
DIG901
RC901
SW9A1
UP
DOWN
SW902
SW919
SW918
SW917
SW916
SW903
SW915
SW914
SW901
SW904
DIG901
(DIGITRON)
RC901
(REMOCON RECEIVER)
SW9A1
▲/▼/◄/►
SW902
ENTER
SW919
MENU
SW918
►►/►►I
SW917
I◄◄\◄◄
SW904
DISC SKIP
SW914
▲ OPEN/CLOSE
SW916
STOP ■
SW903
PAUSE ❚❚
SW915
PLAY ►
SW901
DISC CHANGE


KEY C.B
SW910
CLEAR
SW911
REPEAT
SW912
RANDOM
LED901
STANDBY/ON
To
FRONT C.B
P9902
P9901
6870R5038AA
L902
L901
W901
W910
W914
W908
R906
R907
R939
Q902
Q901
LED901
C919
C921
C920
W928
R905
R904
R903
R902
R901
R995
IC902
SW909
SW908
SW907
SW906
SW905
SW910
SW911
SW912
SW913
5
4
3
2
1
DISC DIRECT PLAY
SW913
POWER

SCHEMATIC DIAGRAM -8/8 (POWER SECTION)

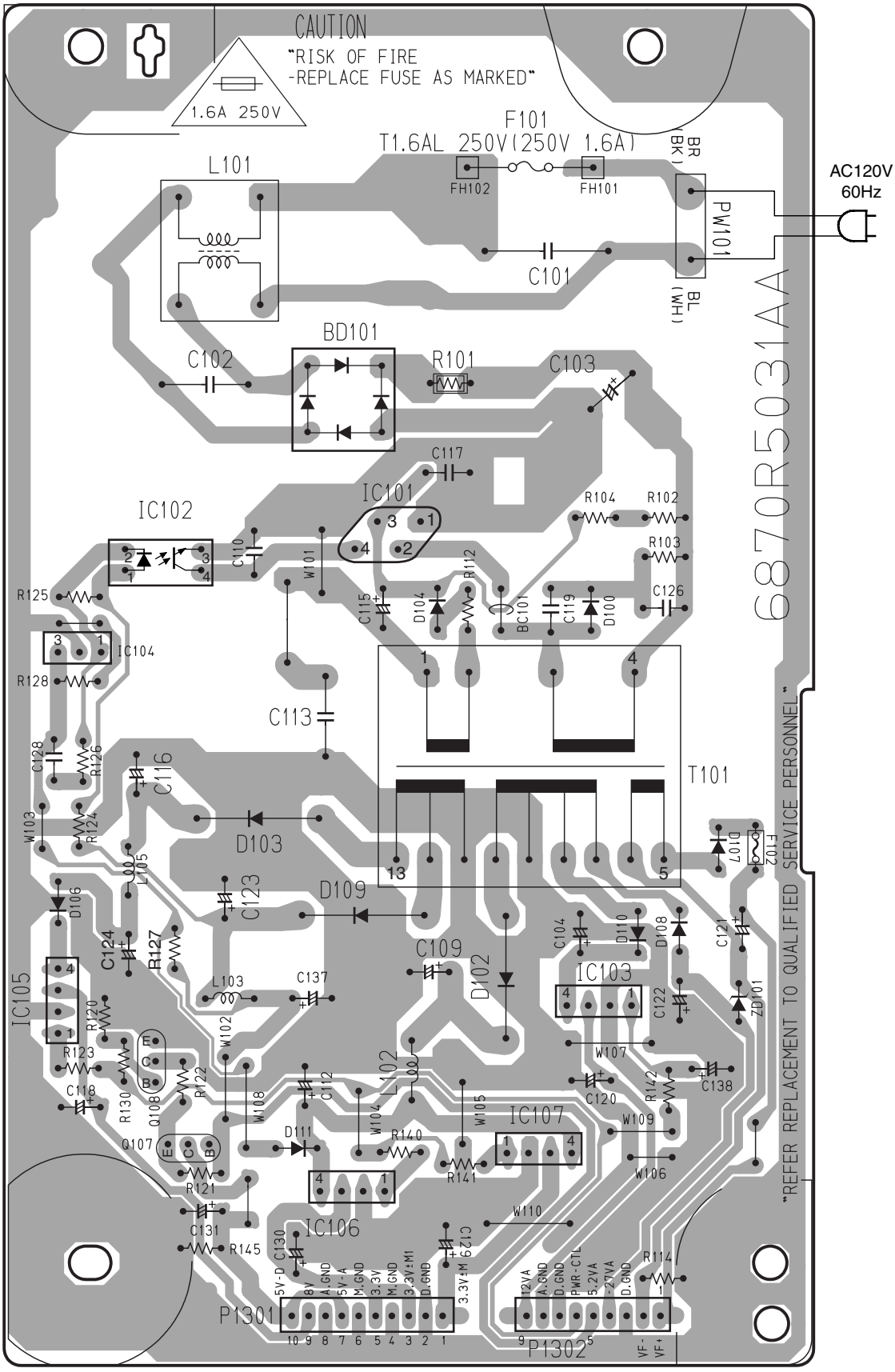


NOTES) ⚠ Warning
Parts that are shaded are critical
With respect to risk of fire or
electricial shock.

15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

A B C D E F G H I J K L M N O P Q R S T U

POWER C.B



To
DVD C.B
P3102

To
DVD C.B
P3101

VOLTAGECHART -1/3

MODE / PIN NO.	STOP	PLAY
IC101		
1	0	0
2	137	138
3	17.28	17.04
4	1.6	1.45
IC102		
1	0.03	0.01
2	0.03	0
3	0	0
4	1.45	1.6
IC103		
1	13.83	13.77
2	12	12
3	0	0
4	5.13	5.13
IC104		
1	2.46	2.46
2	0	0
3	4.02	4.02
IC105		
1	11.37	10.34
2	8	8
3	0	0
4	5.13	5.13
IC106		
1	3.56	3.61
2	3.26	3.26
3	0	0
4	5.14	5.13
IC107		
1	3.56	3.62
2	3.29	3.29
3	0	0
4	5.14	5.13

MODE / PIN NO.	PLAY
DSP	
IC201	
1	3
2	3
3	3
4	3
5	3
6	3
7	3
8	3
9	0
10	3.08~3.1
11	2.97~3.1
12	3~3.1
13	3~3.1
14	3~3.1
15	3~3.1
16	3~3.1
17	3~3.1
18	3.24
19	0.2~0.3
20	0.3
21	0.41~1
22	0.41~1
23	0.41~1
24	3.24
25	0.4~1
26	0.4~1
27	0.4~1
28	0.4~1
29	0.4~1
30	0.4~1
31	0
32	3~3.1
33	3~3.1
34	3~3.1
35	3~3.1
36	0
37	1.597
38	0
39	0
40	0
41	3.24
42	3.24
43	3.24
44	0.5~1.6
45	0.5~1.6
46	0.5~1.6
47	0.15~1
48	0
49	3.2
50	0
51	0.3~1
52	0.2~1
53	0

MODE / PIN NO.	PLAY
54	5.19
55	0
56	0
57	0
58	1.698
59	1.97
60	0
61	3.24
62	0
63	3.24
64	0
65	0
66	0
67	0
68	3.24
69	0
70	3.25
71	0
72	3.24
73	0
74	0
75	0.8
76	2mV~1.459
77	0.795
78	0.795
79	2.17
80	2.13
81	3.27
82	0
83	1.99
84	2.19
85	0
86	0
87	1.989
88	2.08
89	1.987
90	1.645
91	0.834
92	2.43
93	1.628
94	1.648
95	2.42
96	1.636
97	1.649
98	0
99	0
100	1.649
101	3.28
102	3.27
103	2.05
104	2.07
105	1.2~1.39
106	3.23
107	0
108	3.24

MODE / PIN NO.	PLAY
109	3.24
110	0
111	0
112	0
113	0
114	0
115	0
116	0
117	0
118	0
119	0
120	3.23
121	1.59~1.63
122	3.23
123	3.23
124	0
125	3.24
126	3.23
127	0
128	0
129	3.28
130	3.28
131	3.28
132	0
133	0
134	3.24
135	3.24
136	0
137	1.699
138	1.906
139	0
140	0
141	0
142	3.23
143	2.48~2.17
144	0
145	0
146	0
147	0
148	0
149	172mV
150	2.47~2.56
151	0
152	3.23
153	0
154	1.58~1.62
155	0
156	3.23
157	3.23
158	0
159	0
160	0
161	2.72
162	3.27
163	3.27

MODE / PIN NO.	PLAY
164	2.08
165	2.15
166	2.16
167	1.636
168	0
169	2.04
170	0
171	0
172	3.15
173	3.25
174	3.26
175	3.25
176	0
177	3.24
178	3.24
179	2.27~1.97
180	0.22~0.18
181	1~1.3
182	0
183	0
184	0
185	0
186	3.26
187	1.3~1.27
188	3.25
189	1.58
190	1.53
191	1.52
192	0
193	0.52
194	1.5~1.6
195	0.63~0.68
196	2.7~2.8
197	2.7~2.8
198	185mV~1V
199	2.4~2.9
200	17mV~1V
201	17mV~1V
202	17mV~1V
203	17mV~1V
204	17mV~1V
205	2.8
206	1.618
207	3.23
208	3.23

MODE / PIN NO.	STOP	PLAY
IC203		
1	3.18	3.16
2	3.12	2.69
3	3.12	2.69
4	0	0
5	3.12	2.74
6	3.12	2.71
7	3.18	3.17
8	3.12	2.68
9	3.12	2.63
10	0	0
11	3.12	2.7
12	3.12	2.7
13	3.18	3.17
14	0	0
15	3.12	3.04
16	3.12	0
17	3.12	3.02
18	0	0
19	0	0
20	0	3.12
21	3.13	0
22	3.13	3.17
23	3.13	0
24	0	0
25	3.18	0
26	0	0
27	0	0
28	3.12	0
29	0	3.12
30	0	0
31	0	3.17
32	0	0
33	3.1	0
34	3.18	0
35	1.5	0
36	0	3.12
37	0	0
38	3.18	0
39	3.12	3.12
40	3.12	3.12
41	0	3.17
42	3.12	0
43	3.12	0
44	3.18	0
45	3.12	3.12
46	2.76	3.12
47	0	0
48	3.12	2.76
49	3.12	2.76
50	0	0

MODE / PIN NO.	STOP	PLAY
IC206		
1	2.63	2.64
2	2.74	0
3	2.74	2.76
4	0	0
5	1.92	1.88
6	2.28	0
7	2.28	0
8	5.04	0
IC2A2		
1	1.57	1.56
2	1.57	1.56
3	1.57	0
4	0	0
5	1.62	1.62
6	1.62	1.62
7	2.28	0
8	5.04	4.99
IC2A4		
1	4.87	4.39
2	2.3	2.31
3	2.29	2.29
4	0	0
5	2.29	2.29
6	2.3	2.31
7	2.51	2.45
8	5.02	5.02

MODE / PIN NO.	PLAY
DEIVE&RF	
IC2A1	
1	NC
2	3.1V
3	2.5~3.7
4	2
5	3.4
6	2.5
7	NC
8	NC
9	0
10	1.2V
11	2.78V
12	3.0~3.6
13	3.0~3.6
14	2.7V
15	1.9V
16	NC
17	NC
18	0
19	0
20	0
21	5.18V
22	5.18V
23	NC
24	NC
25	NC
26	0~3.8V
27	0V~4V
28	3.3V
29	5.2V
30	0
31	0V
32	NC
33	NC
34	5.18V
35	NC
36	2.2V~3.5
37	2.2V
38	3.4~3.8V
39	2.2~2.6
40	0V
41	5V
42	0
43	0.4V
44	4V
45	2.4V
46	2.4V
47	2.4~2.6V
48	NC
49	NC
50	2.4V~2.6V
51	2.4V~2.6V
52	2.4V~2.6V
53	2.4V

MODE / PIN NO.	PLAY
54	2.4V
55	2.4V
56	2.4V
57	2.4V
58	2.4V
59	2.4V
60	2.4V
61	0V
62	0V
63	5V
64	0V
IC2M1	
1	2.16
2	2.22
3	2.16
4	2.16
5	2.16
6	2.15
7	0
8	2.58
9	2.16
10	2.16
11	2.22
12	2.23
13	2.25
14	0
15	0
16	2.25
17	0
18	0
19	0
20	0
21	0
22	0
23	8
24	3.73
25	3.73
26	3.73
27	3.73
28	3.82
29	3.61
30	0
31	0
32	4.68
33	2.78
34	0
35	3.7
36	3.75
37	3.84
38	3.6
39	8.01
40	1.94
41	0~1.94
42	1.94
43	0

MODE / PIN NO.	PLAY
44	8.01
45	2.16
46	0
47	7.96
48	2.1

VOLTAGECHART -2/3

MODE / PIN NO.	PLAY
MEMORY	
IC301	
1	4.4
2	0
3	0
4	0
5	3.2
6	0
7	0
8	0
9	0
10	0
11	0
12	3.2
13	3.2
14	0
15	0
16	0
17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	3.2
27	0
28	0
29	0
30	0
31	0
32	0
33	0
34	2.2
35	0
36	0
37	0
38	3.2
39	0
40	0
41	0
42	0
43	2.2
44	0
45	3.2
46	2.4
47	3.2
48	2.3
49	0
50	0
51	3.2
52	1.7
53	3.1

MODE / PIN NO.	PLAY
54	0
55	0
56	0
57	3.2
58	0
59	0
60	0
61	0
62	0
63	0
64	0
65	0
66	0
67	0
68	3.2
69	0
70	3.2
71	3.2
72	0
73	0
74	3.2
75	0
76	1.5
77	0
78	4.4
79	0
80	0
81	0
82	3.2
83	0
84	0
85	3.2
86	0
87	4.4
88	3.2
89	2.6
90	3.2
91	3.2
92	3.2
93	3.2
94	0
95	3
96	0
97	3.2
98	3.2
99	4.7
100	0

MODE / PIN NO.	STOP	PLAY
IC305		
1	3.06	3.05
2	0.29	0.35
3	3.06	3.05
4	3.06	0.33
5	0	0
6	0	0
7	0	0.34
8	0.4	0
9	0	3.05
10	0.33	0
11	0.41	0
12	0	0
13	0	0.46
14	0	0
15	3.06	3.05
16	0	0
17	3.09	3.07
18	0	2.82
19	2.84	3.03
20	3.05	2.76
21	0	0
22	0	1.38
23	0.8	0.79
24	0	0
25	1.14	1.1
26	0.38	1.54
27	0	0
28	0	0
29	0	0.05
30	0	0
31	0	0
32	0	0
33	0	0
34	0.34	0
35	3.03	3.05
36	0	0.34
37	0	0
38	0	0
39	0.56	0
40	0.56	0
41	0	3.05
42	3.03	0.45
43	3.03	3.05
44	0	0
45	0	0.44
46	0	0
47	0.38	0
48	0	0
49	3.03	0
50	0.36	3.05
51	0	0.34
52	0	0
53	0	0
54	0.41	0

MODE / PIN NO.	STOP	PLAY
55	3.03	3.05
56	0	0.34
57	0	0
58	0	0
59	0	0
60	0	0.79
61	0	0.79
62	0	2.26
63	0	0.74
64	0	0.78
65	0	0
66	0	0
67	3.11	3.1
68	1.6	1.59
69	0	0
70	0	0
71	0	0
72	0	0
73	0	0
74	0	0.45
75	3.04	3.05
76	0	0
77	0	0
78	0	0
79	0	0
80	0	0.34
81	1.69	0
82	0	0
83	0	0
84	0	0
85	0	0.33
86	0	0

MODE / PIN NO.	STOP	PLAY
IC3F1		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	3.13	2.92
10	0	0
11	3.13	3.12
12	3.2	3.2
13	3.2	3.2
14	0	0
15	0	0
16	3.19	0
17	0	0
18	0	0
19	0	0
20	0	0
21	0	0
22	0	0
23	0	0
24	0	0
25	3.11	3.11
26	3.17	3.2
27	0	0
28	3.11	0
29	0.61	1.07
30	0	0
31	0.6	0
32	0	0
33	0.59	0
34	0	0
35	0.61	0
36	0	0
37	3.18	0
38	0	0
39	0	0
40	2.17	0
41	0	0
42	0.38	2.28
43	0	0
44	0.41	0.65
45	0	0
46	0	0
47	0	0
48	0	0

MODE / PIN NO.	STOP	PLAY
IC401		
1	2.98	2.98
2	3.26	3.26
3	0	0
4	1.57	0
5	1.58	1.58
6	1.3	0
7	0	0
8	3.24	3.24
9	0	0
10	3.2	3.19
11	4.85	4.84
12	2.31	0
13	2.35	0
14	2.35	0
15	0	0
16	0	0
17	4.91	0
18	2.34	2.34
19	2.34	2.33
20	0	0
IC402		
1	5.47	5.47
2	5.47	5.47
3	5.47	5.47
4	0	0
5	5.47	5.47
6	5.47	5.47
7	5.47	5.47
8	11.95	11.95

VOLTAGECHART -3/3

MODE / PIN NO.	PLAY
PANTERA	
IC501	
1	3.1
2	1.3
3	1.4
4	1.8
5	1.5
6	0
7	1.5
8	1.4
9	1.6
10	3.1
11	0.7
12	0.15
13	0.15
14	0
15	0
16	1.7
17	0
18	3.1
19	1.5
20	1.6
21	0
22	1.6
23	0
24	3.1
25	1.7
26	1.4
27	3.1
28	1.5
29	0.15
30	NC
31	0
32	0.7
33	1.5
34	1.8
35	2
36	3.1
37	2.9
38	2.2
39	2.9
40	0
41	0
42	0
43	1.6
44	3.1
45	1.6
46	1.5
47	0
48	1.4
49	0
50	1.5
51	1.7
52	1.2
53	3.1

MODE / PIN NO.	PLAY
54	1.6
55	1.4
56	1.5
57	0
58	1.6
59	1.4
60	1.5
61	1.4
62	3.1
63	1
64	1.5
65	0.005
66	0.5
67	0
68	1.58
69	0
70	3.1
71	1.2
72	1.2
73	1.2
74	1.2
75	3.1
76	1.65
77	1.8
78	1.5
79	1.5
80	3.1
81	3.1
82	0
83	3.1
84	3.7
85	0
86	0
87	3.1
88	3.1
89	1.8
90	0.004
91	3.1
92	0
93	NC
94	NC
95	NC
96	NC
97	0
98	0.85/0.92
99	0.89/0.93
100	0
101	1.8
102	3.1
103	0
104	0
105	0
106	0
107	3.1
108	2.1

MODE / PIN NO.	PLAY
109	0
110	0.8
111	0.9
112	1.3
113	3.1
114	0.78
115	0
116	1.26
117	NC
118	0.08
119	1.2
120	2
121	0
122	3.1
123	3.1
124	3.1
125	3.1
126	NC
127	0
128	0
129	0
130	0
131	0
132	0
133	3.13/0
134	0
135	1.8
136	0
137	3.1
138	3.1
139	3.1
140	3.1
141	3.1
142	3.1
143	3.1
144	3.1
145	3.1
146	3.1
147	0
148	3.1
149	3.1
150	3.1
151	3.1
152	3.1
153	3.1
154	3.1
155	3.1
156	3.1
157	3.1
158	3.1
159	1.8
160	1.5
161	3.1
162	0
163	0

MODE / PIN NO.	PLAY
164	3.1
165	3.1
166	3.1
167	3.1
168	3.1
169	3.1
170	3.1
171	0
172	3.1
173	3.1
174	3.1
175	1.5
176	3.1
177	0
178	3.1
179	3.1
180	3.1
181	3.1
182	3.18
183	0.086
184	3
185	2.4
186	2.3
187	0
188	0
189	3.1
190	0
191	0.017
192	1.8
193	3.1
194	3.1
195	0
196	3.1
197	1.3
198	3.1
199	3.1
200	3.1
201	0
202	2.3
203	3.1
204	0
205	3.1
206	3.1
207	3.1
208	1.6
209	3.1
210	3.1
211	0.018
212	1.8
213	3.19
214	2.69
215	1.5
216	2.9
217	2.59
218	0

MODE / PIN NO.	PLAY
219	2.29
220	2.08
221	2.29
222	2.29
223	2.49
224	3.1
225	2.39
226	2.45
227	1.5
228	0
229	1.52
230	0
231	1.61
232	1.6
233	3.1
234	1.6
235	1.6
236	1.5
237	0
238	1.6
239	1.4
240	1.5

MODE / PIN NO.	STOP	PLAY
IC502		
1	0	0
2	5.03	5.03
3	0	0
4	5.1	5.1
5	0	0
6	5.04	5.04
7	0	0
8	5.03	5.04
IC503		
1	0	0
2	3.1	3.1
3	5.03	5.03
4	0	0
5	0	0
6	0	0
7	5.05	5.05
8	0	3.15
9	0	0
10	0	0
11	0	0.46
12	0	0.15
13	3.11	3.1
14	0	0
15	0	0
16	0	0
17	3.09	3.09
18	5.15	5.14
19	0	0
20	5.15	5.15
IC506		
1	0	0
2	1.8	0

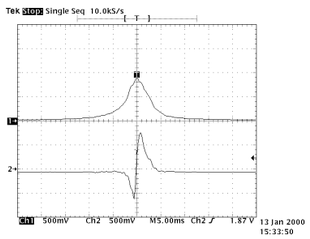
MODE / PIN NO.	STOP	PLAY
IC901		
1	0	0
2	5.1	5.05
3	0	0
4	5.14	5.14
5	0.48	0
6	0.48	0
7	5.17	5.17
8	2.22	2.21
9	2.35	2.35
10	0	0
11	2.26	2.24
12	2.46	2.45
13	0	0
14	5.17	5.16
15	5.17	5.16
16	5.1	5.06
17	0	0
18	0	0
19	5.16	5.16
20	5.14	5.14
21	5.01	5.02
22	0	0
23	0	0
24	0	0
25	2.68	2.68
26	5.17	5.17
27	5.17	5.17
28	4.77	4.87
29	5.07	5.06
30	21.58	18
31	23.58	18
32	23.6	23
33	27.54	21.21
34	23.6	17.18
35	23.6	22.91
36	21.6	19.14
37	21.61	25.01
38	23.65	23.06
39	23.65	23.09
40	23.57	23.08
41	25.6	23.07
42	25.6	25.03
43	25.6	23.03
44	25.6	23.07
45	27.6	25.07
46	27.6	21.16
47	27.5	25.11
48	27.5	24.76
49	27.5	27.86
50	27.5	26.88
51	6.73	6.69
52	25.7	25.13
53	25.6	25.08
54	25.6	25.16

MODE / PIN NO.	STOP	PLAY
55	25.6	25.15
56	25.6	25.08
57	25.6	25.08
58	27.7	27.08
59	5.16	5.15
60	5.16	5.16
61	5.16	5.16
62	5.16	5.16
63	0	0
64	0	0
IC902		
1	5.25	5.25
2	0	0
3	5.25	5.25
RC901		
1	4.75	4.75
2	4.76	4.76
3	0	0

MODE / PIN NO.	STOP	PLAY
Q107		
E	5.17	5.17
C	5.1	5.1
B	4.39	4.39
Q108		
E	0	0
C	0.07	0.07
B	0.7	0.7
Q2A1		
E	5.02	0
C	0	0
B	0	0
Q2A2		
E	5.02	4.95
C	5.01	4.95
B	0	0
Q2A5		
E	2.34	2.35
C	0	0
B	3.82	0
Q2A6		
E	0	2.41
C	0	3.1
B	3.62	3.72
Q2M1		
E	0	0
C	0	3.14
B	0	0
Q605		
E	1.67	0
C	0.78	2.1
B	0	0
Q606		
E	1.66	0
C	0.78	1.02
B	0	0
Q607		
E	0	0
C	0.1	0
B	0.78	1.02
Q608		
E	0	0
C	0.1	0
B	0.78	1.02
Q615		
E	5.25	5.25
C	5.22	0.82
B	4.5	5.25

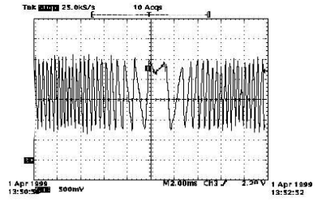
MODE / PIN NO.	STOP	PLAY
Q901		
E	0	0
C	5.2	5.2
B	0	0
Q902		
E	5.17	5.2
C	0	0
B	5.17	5.2

①



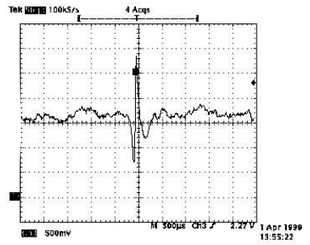
IC2A1 Pin 39, Focus Error

②



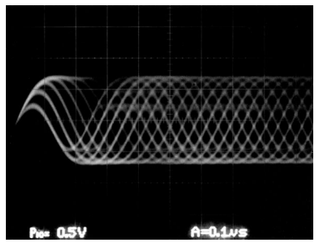
IC2A1 Pin 36
Tracking Error

③



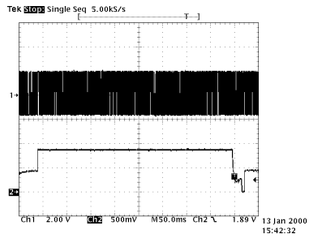
IC2A1 Pin 36
VBR TRACKING Error

④



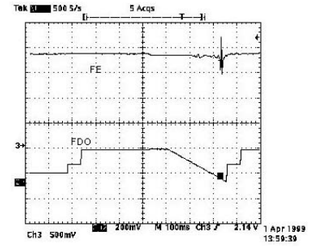
Q2A6 Collector output(TP2A0)
RF

⑤



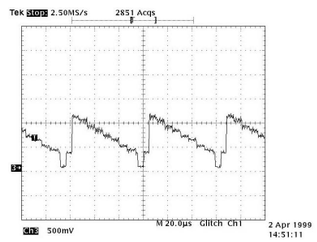
IC201 Pin 80, SLED Drive(FMO)

⑥



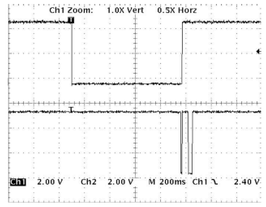
IC2A1 Pin 39, Focus Error(in Focus Search)
IC201 Pin 88, Focus Drive(FDO)

⑬



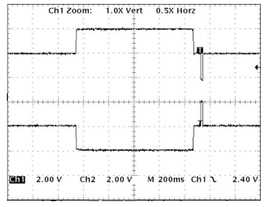
IC501 Pin 114
Component Y

⑭



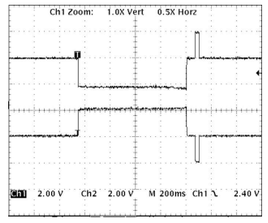
TURN(+)(-) Signal from µ-com
IC301 6, 8

⑮



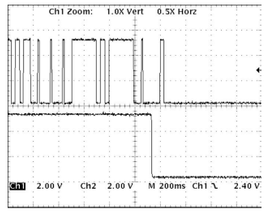
TURN(+)(-) from Motor Drive
Forward turn, IC2M1 16

⑯



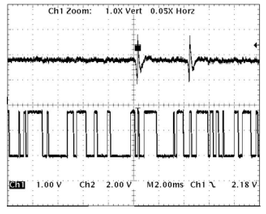
TURN(+)(-) from Motor Drive
Reverse turn, IC2M1 17

⑰



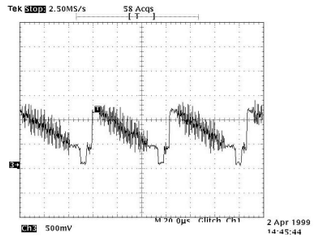
Sensor 1 (disc position)
Sensor 2 (disc ready),
IC301 78,79

⑱



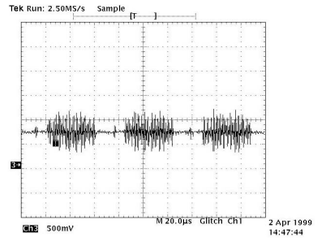
TE/TZC After tracking
servo ON (Play mode),
IC2A1 36, IC2A4 7

⑦



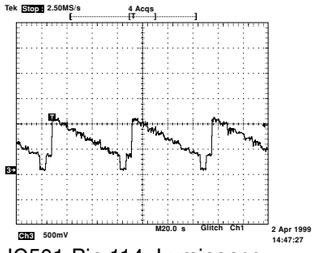
IC501 Pin 118, Composite

⑧



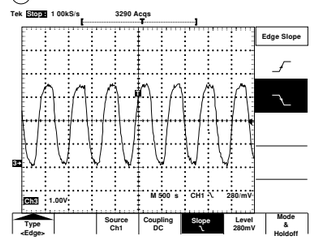
IC501 Pin 112, Chrominance
(Super video out Mode)

⑨



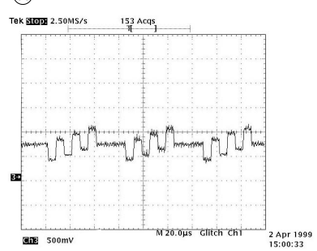
IC501 Pin 114, Luminance
(Super video out Mode)

⑩



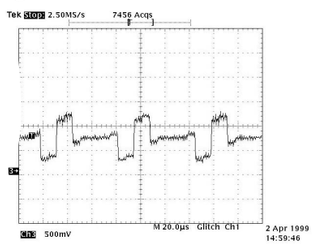
IC501 Pin 99,
MPEG Clock(27MHz)

⑪



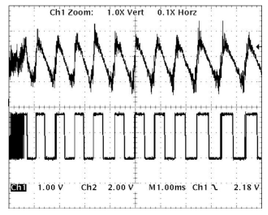
IC501 Pin 112
Component Pb

⑫



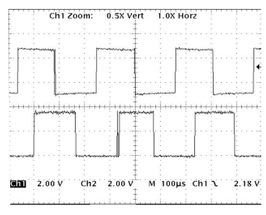
IC501 Pin 110
Component Pr

⑲



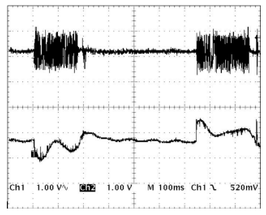
TE/TZC Before tracking
servo ON
IC2A1 36, IC2A4 7

⑳

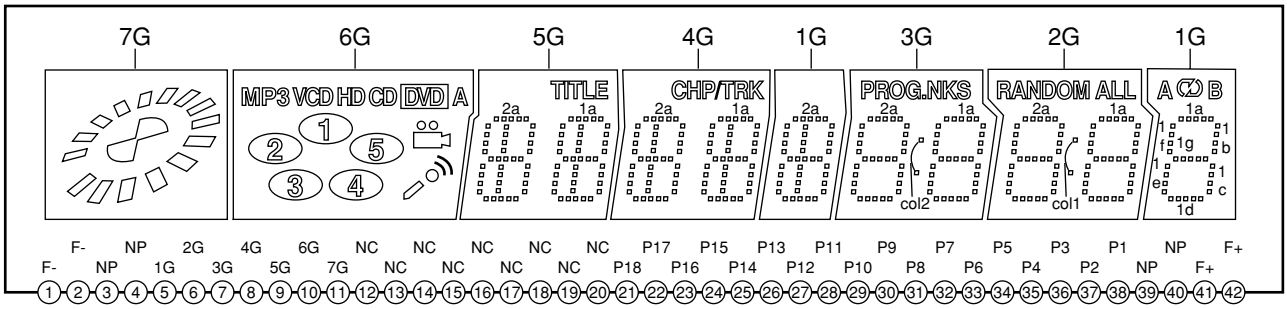


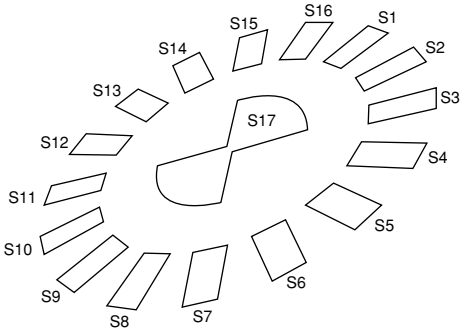
TZC/MIRR (Search mode)
IC2A4 7, IC2A1 27

㉑

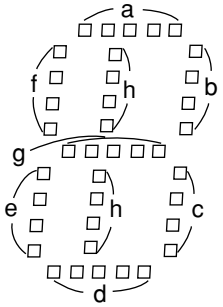


TE/SLD(+) Search mode
(outter & inner),
IC2A1 36, IC2M1 28





(7G)



(1G,4G,5G)

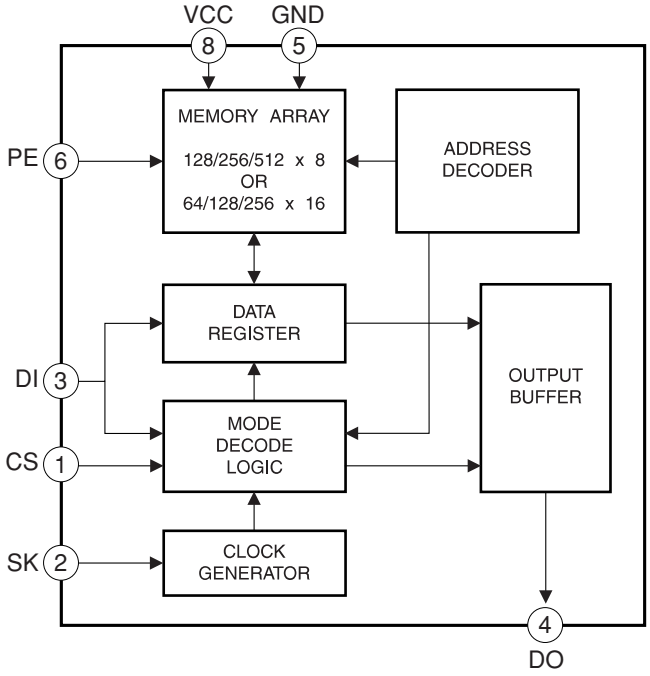
NOTE: 1) F+,F- ..... Filament
2) NP ..... No pin
3) NC ..... No connection
4) DL ..... Datum Line
5) 1G-7G ..... Grid

ANODE CONNECTION

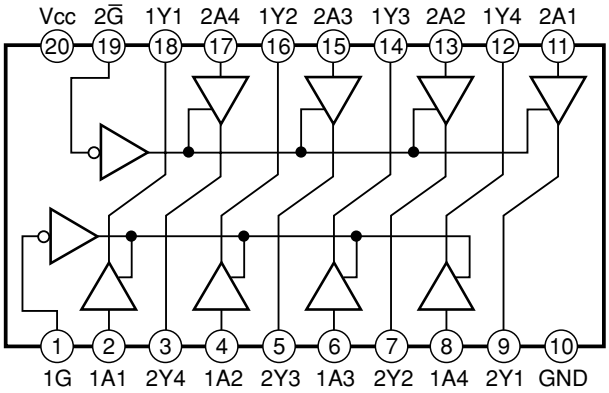
	7G	6G	5G	4G	3G	2G	1G
P1	S1	DVD	1a	1a	1a	1a	1a
P2	S2	VCD	1b	1b	1b	1b	1b
P3	S3	HD	1f	1f	1f	1f	1f
P4	S4	CD	1g	1g	1g	1g	1g
P5	S5	MP3	1c	1c	1c	1c	1c
P6	S6	A	1e	1e	1e	1e	1e
P7	S7		1d	1d	1d	1d	1d
P8	S8		1h	1h	col2	col1	B
P9	S9	1	2a	2a	2a	2a	2a
P10	S10	2	2b	2b	2b	2b	2b
P11	S11	3	2f	2f	2f	2f	2f
P12	S12	4	2g	2g	2g	2g	2g
P13	S13	5	2c	2c	2c	2c	2c
P14	S14	–	2e	2e	2e	2e	2e
P15	S15	–	2d	2d	2d	2d	2d
P16	S16	–	2h	2h	–	ALL	2h
P17	S17	–	TITLE	CHP/TRK	NKS	RANDOM	
P18	–	–	–	–	PROG.	–	A

IC BLOCK DIAGRAM -1/4

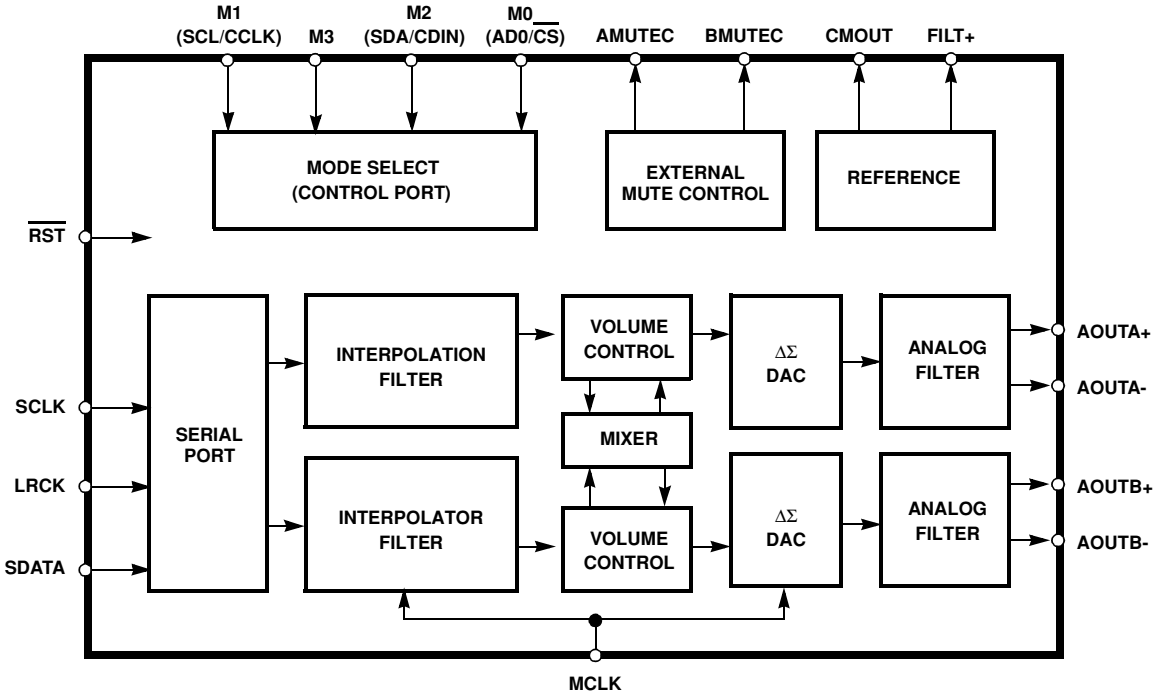
IC, AT93C56-10SC



IC, MM74HCT244SJ

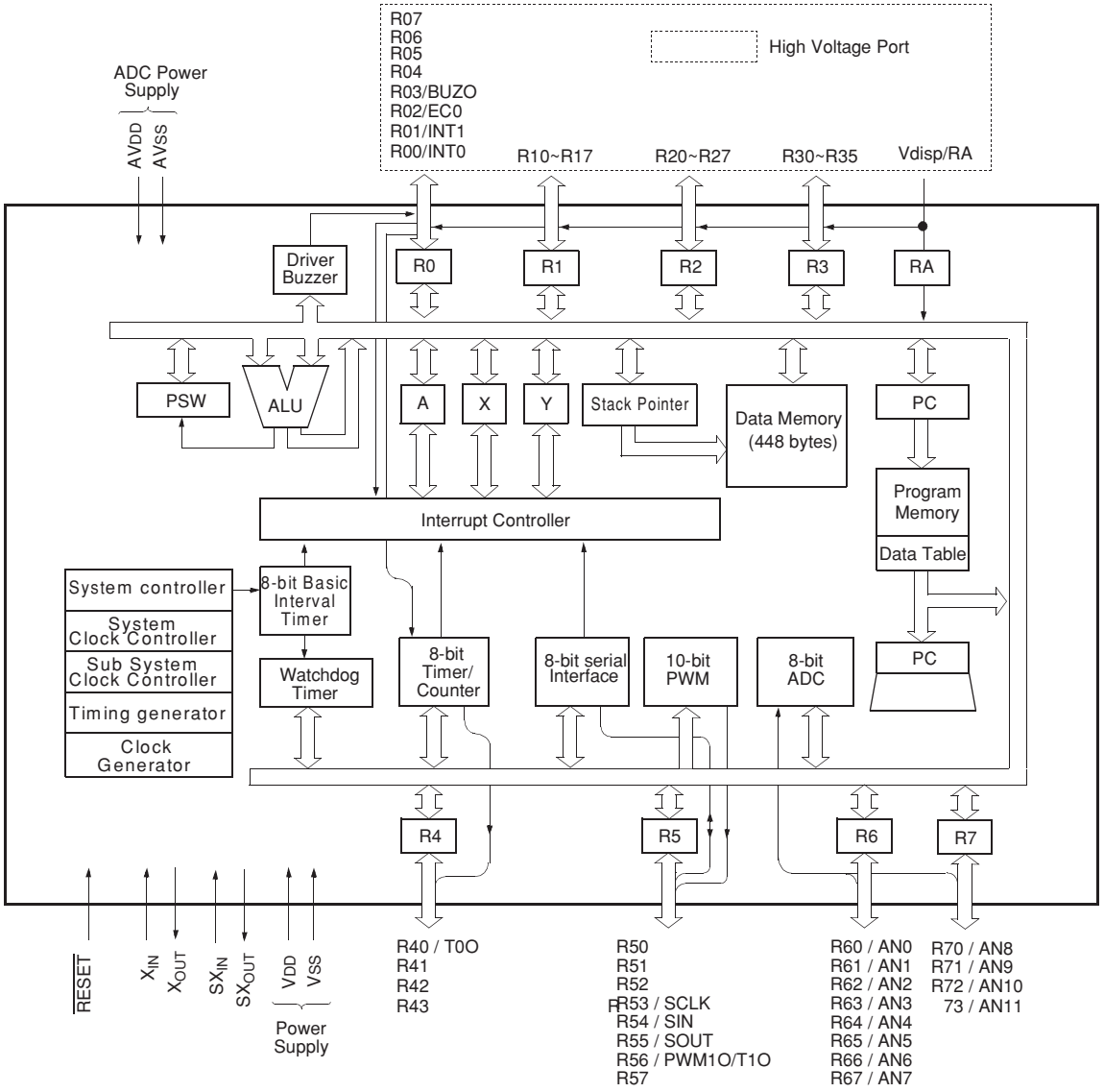


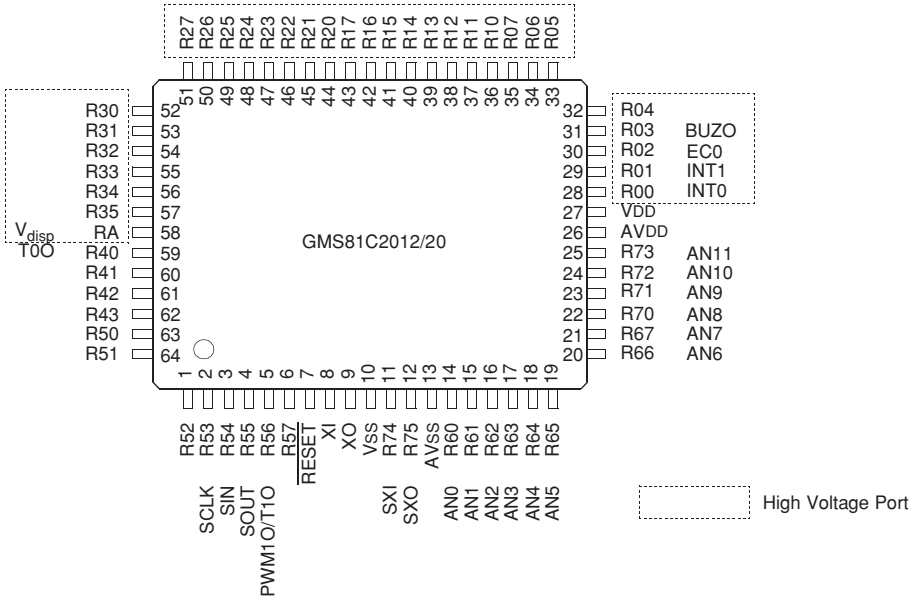
IC, CS4391-KZR



IC BLOCK DIAGRAM -2/4

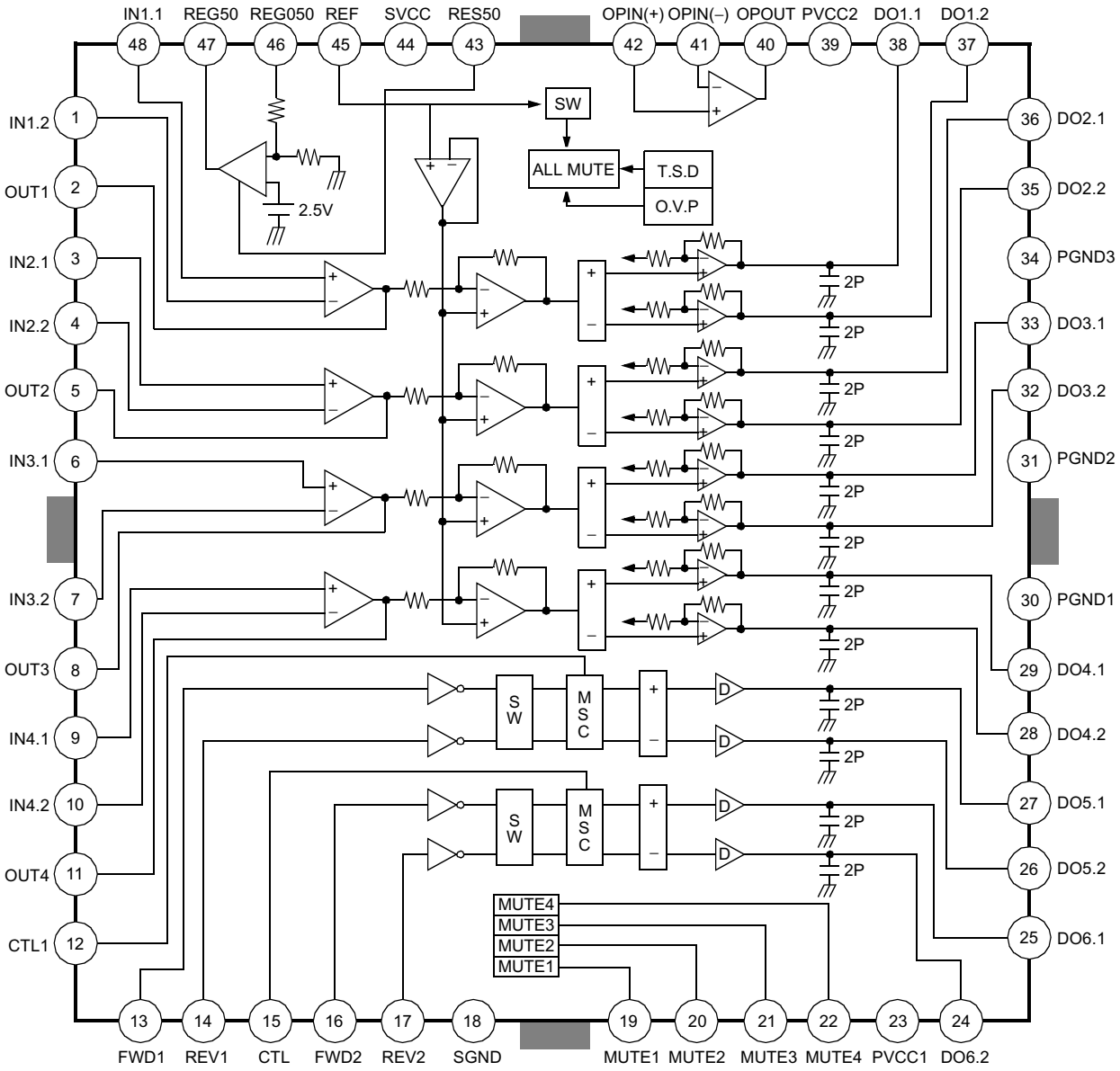
IC, GMS81C2012-HI013





IC BLOCK DIAGRAM -3/4

IC, KA3031

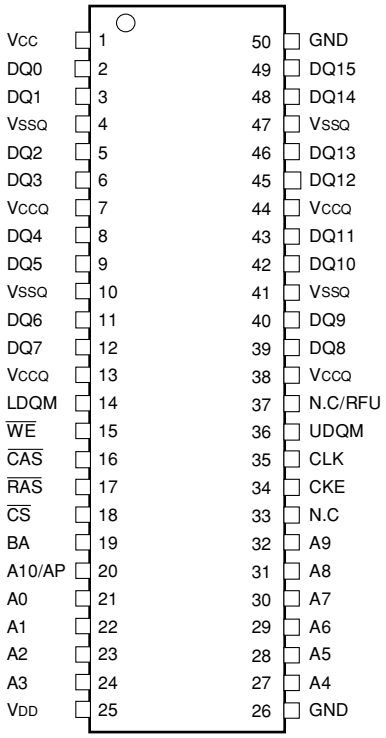


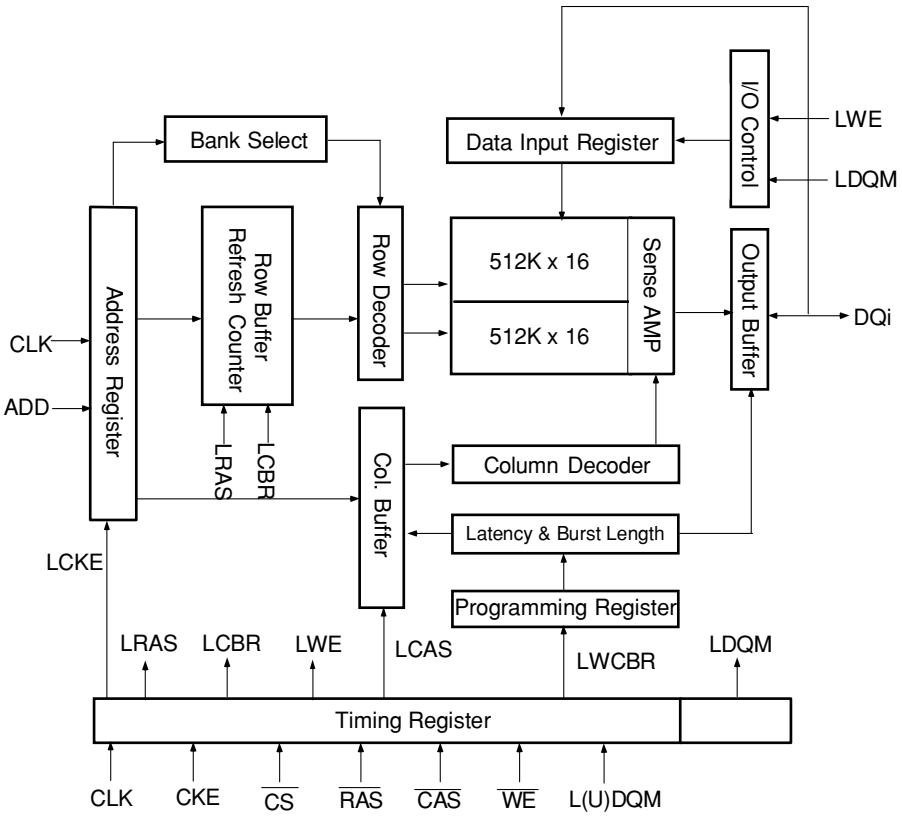
NOTES:

1. SW = Logic switch
2. MSC = Motor speed control
3. D = Output driver

IC BLOCK DIAGRAM -4/4

IC, M12L16161A





IC DESCRIPTION -1/3 (HD153702TF -1/2)

Pin No.	Pin Name	I/O	Description
1	NC	-	Not connect
2	RFIN	I	RF differential input terminal
3	RFIP		
4	SUMF	I	SUM RF input /DC filter connection terminal for SUM differential amplifier
5	AGHPF	-	The high path filter connection terminal for AGC
6	AGFR	-	The filter connection terminal for AGC
7	AGFI		
8	AGFU		
9	GND_RF	-	Ground connection terminal (RF system)
10	IREFE	-	The external resistance connection terminal for setting up the cutoff frequency of RF equalizer
11	EQHPF	-	The connection terminal of AGC-DET input high-path filter capacity
12	EQOP	-	The differential output terminal of RF equalizer
13	EQON		
14	TOPH	-	Envelop detection top hold terminal
15	BOTH	-	Envelop detection bottom hold terminal
16	NC	-	Not connect
17	NC	-	Not connect
18	GND	-	Ground connection terminal
19	RFHLD	I	RF system hold control signal input terminal
20	IDGATE	I	ID selection pulse input signal
21	LO_ZB	I	Low_Z(Reversal)pulse input terminal
22	RDGATE	I	Read gate signal input terminal
23	WOBSIG	O	Wobble detection output terminal
24	IP2	O	ID detection output terminal
25	IP1		
26	DFT	O	DEFECT detection output terminal
27	MIRR	O	MIRROR and BLANK detection output terminal
28	MRSTB	I	Master reset (reversal) input terminal
29	SCLK	I	Serial I / F clock input terminal
30	SDATA	O	Serial I / F data input-and-output terminal
31	SDEN	I	Serial I / F enable signal input terminal
32	NC	-	Not connect
33	NC	-	Not connect
34	VCC_SRV	-	Power-supply connection terminal (SERVO system)
35	SIGM	O	Analog signal monitor output terminal
36	TE	O	Tracking error output terminal
37	LE	O	Lens position error output terminal
38	PE	O	Pull in error output terminal
39	FE	O	Focus error output terminal
40	MD2	I	The monitor diode input terminal of APC2
41	LD2	O	The laser diode output terminal of APC2

Pin No.	Pin Name	I/O	Description
42	GND_SRV	-	Ground connection terminal (SERVO system)
43	MD1	I	The monitor diode input terminal of APC1
44	LD1	O	The laser diode output terminal of APC1
45	IREFT	-	The external resistance connection terminal for setting up servo system standard current
46	VREF1	O	Servo system standard bias voltage output terminal
47	MD	I	DVD4D input terminal
48	NC	-	Not connect
49	NC	-	Not connect
50	MC	O	Servo system standard bias voltage output terminal
51	MB		
52	MA		
53	FON	I	DVD focus error differential input terminal
54	FOP		
55	TRN	I	CD tracking error differential input terminal
56	TRP		
57	SD	I	CD4D / SUB4D input terminal
58	SC		
59	SB		
60	SA		
61	SUBI	I	SUB signal input terminal
62	SUBO	O	SUB signal output terminal
63	VCC_RF	-	Power-supply connection terminal (RF system)
64	NC	-	Not connect

IC DESCRIPTION -2/3 (M12L16161A-7T -1/2)

Pin No.	Pin Name	I/O	Description
1	VCC	-	3.3 V is applied. (VCC is for the internal circuit.)
2	DQ0	I/O	Data is input and ouput from these pins. These pins are the same as those of a conventional DRAM.
3	DQ1		
4	VSSQ	-	Ground is connected. (VSSQ is for the output buffer.)
5	DQ2	I/O	Data is input and ouput from these pins. These pins are the same as those of a conventional DRAM.
6	DQ3		
7	VCCQ	-	3.3 V is applied. (VCCQ is for the output buffer.)
8	DQ4	I/O	Data is input and ouput from these pins. These pins are the same as those of a conventional DRAM.
9	DQ5		
10	VSSQ	-	Ground is connected. (VSSQ is for the output buffer.)
11	DQ6	I/O	Data is input and ouput from these pins. These pins are the same as those of a conventional DRAM.
12	DQ7		
13	VCCQ	-	3.3 V is applied. (VCCQ is for the output buffer.)
14	LDQM	I	DQM controls input/output buffers. - Read operation: If DQM is High, The output buffer becomes High-Z. If the DQM is Low, the output buffer becomes Low-Z. - Write operation: If DQM is High, the previous data is held (the new data is not written). If DQM is Low, the data is written.
15	$\overline{MWE}$	I	Although these pin names are the same as those of conventional DRAMs, they function in a different way. These pins define operation commands (read, write, etc.) depending on the combination of their voltage levels. For details, refer to the command operation section.
16	$\overline{CAS}$		
17	$\overline{RAS}$		
18	$\overline{CS1}$	I	When $\overline{CS}$ is Low, the command input cycle becomes valid. When $\overline{CS}$ is high, all inputs are ignored. However, internal operations (bank active, burst operations, etc.) are held.
19	MA11	I	A11 is a bank select signal (BS). The memory array of the GM72V161621ET/ELT Series is divided into bank 0 and bank 1. GM72V161621ET/ELT Series contain 2048 row x 256 column x 16bits. If A11 is Low, bank 0 is selected, and if A11 is High , bank 1 is selected.
20	MA10	I	Row address (AX0 to AX10) is determined by A0 to A10 level at the bank active command cycle CLK rising edge. Column address is determined by A0 to A7 level at the read or write command cycle CLK rising edge. And this column address becomes burst access start address. A10 defines the precharge mode. When A10 = High at the precharge command cycle, both banks are precharged. But when A10 = Low at the precharge command cycle, only the bank that is selected by A11 (BS) is precharged.
21	MA0		
22	MA1		
23	MA2		
24	MA3		
25	VCC	-	3.3 V is applied. (VCC is for the internal circuit.)
26	GND	-	Ground is connected. (VSS is for the internal circuit.)
27	MA4	I	Row address (AX0 to AX10) is determined by A0 to A10 level at the bank active command cycle CLK rising edge. Column address is determined by A0 to A7 level at the read or write command cycle CLK rising edge. And this column address becomes burst access start address. A10 defines the precharge mode. When A10 = High at the precharge command cycle, both banks are precharged. But when A10 = Low at the precharge command cycle, only the bank that is selected by A11 (BS) is precharged.
28	MA5		
29	MA6		
30	MA7		
31	MA8		
32	MA9		
33	NC	-	Not used.

IC DESCRIPTION -2/3 (M12L16161A-7T -2/2)

Pin No.	Pin Name	I/O	Description
34	CKE	I	This pin determines whether or not the next CLK is valid. If CKE is High, the next CLK rising edge is valid. If CKE is Low, the next CLK rising edge is invalid. This pin is used for power-down and clock suspend modes.
35	CLK	I	CLK is the master clock input to this pin. The other input signals are referred at CLK rising edge.
36	UDQM	I	DQM controls input/output buffers. - Read operation: If DQM is High, The output buffer becomes High-Z. If the DQM is Low, the output buffer becomes Low-Z. - Write operation: If DQM is High, the previous data is held (the new data is not written). If DQM is Low, the data is written.
37	NC	–	Not used
38	VCCQ	–	3.3 V is applied. (VCCQ is for the output buffer.)
39	MD8	I/O	Data is input and ouput from these pins. These pins are the same as those of a conventional DRAM.
40	MD9		
41	VSSQ	–	Ground is connected. (VSSQ is for the output buffer.)
42	MD10	I/O	Data is input and ouput from these pins. These pins are the same as those of a conventional DRAM.
43	MD11		
44	VCCQ	–	3.3 V is applied. (VCCQ is for the output buffer.)
45	MD12	I/O	Data is input and ouput from these pins. These pins are the same as those of a conventional DRAM.
46	MD13		
47	VSSQ	–	Ground is connected. (VSSQ is for the output buffer.)
48	MD14	I/O	Data is input and ouput from these pins. These pins are the same as those of a conventional DRAM.
49	MD15		
50	GND	–	Ground is connected. (VSS is for the internal circuit.)

IC DESCRIPTION -3/3 (HDC25D811B -1/6)

Pin No.	Pin Name	I/O	Description
1	DAT0	I/O	bi-directional data to DRAM
2	DAT1	I/O	bi-directional data to DRAM
3	DAT2	I/O	bi-directional data to DRAM
4	DAT3	I/O	bi-directional data to DRAM
5	DAT4	I/O	bi-directional data to DRAM
6	DAT5	I/O	bi-directional data to DRAM
7	DAT6	I/O	bi-directional data to DRAM
8	DAT7	I/O	bi-directional data to DRAM
9	GND	-	GND
10	DAT8	I/O	bi-directional data to DRAM
11	DAT9	I/O	bi-directional data to DRAM
12	DAT10	I/O	bi-directional data to DRAM
13	DAT11	I/O	bi-directional data to DRAM
14	DAT12	I/O	bi-directional data to DRAM
15	DAT13	I/O	bi-directional data to DRAM
16	DAT14	I/O	bi-directional data to DRAM
17	DAT15	I/O	bi-directional data to DRAM
18	VDD	-	VDD
19	ADD0	O	Address output to DRAM
20	ADD1	O	Address output to DRAM
21	ADD2	O	Address output to DRAM
22	ADD3	O	Address output to DRAM
23	ADD4	O	Address output to DRAM
24	VDD	-	VDD
25	ADD5	O	Address output to DRAM
26	ADD6	O	Address output to DRAM
27	ADD7	O	Address output to DRAM
28	ADD8	O	address output to DRAM
29	ADD9	O	address output to DRAM
30	ADD10	O	address output to DRAM
31	GND	-	GND
32	BS	O	SDRAM bank selection signal
33	RAS	O	DRAM RAS
34	CAS	O	DRAM CAS
35	WE	O	DRAM WE
36	DQM(OE)	O	SDRAM DQM / EDO DRAM OE
37	SDRAMCLK	O	SDRAM clock
38	DMEMTEST	I	DIRECT MEMORY TEST
39	TEST_SE	I	TEST INPUT
40	GND	-	GND
41	TESTOUT0	I/O	TEST OUT (Default 0)

Pin No.	Pin Name	I/O	Description
42	TESTOUT1	I/O	TEST OUT (Default 0)
43	TESTOUT2	I/O	TEST OUT (Default 0)
44	TESTOUT3	I/O	TEST OUT (Default 0)
45	TESTOUT4	I/O	TEST OUT (Default 0)
46	TESTOUT5	I/O	TEST OUT (Default 0)
47	TESTOUT6	I/O	TEST OUT (Default 0)
48	TESTOUT7	I/O	TEST OUT (Default 0)
49	VDD	-	VDD
50	T_SEL	I	TEST INPUT (NORMAL 0)
51	TESTOUT8	I/O	TEST OUT (Default 0)
52	TESTOUT9	I/O	TEST OUT (Default 0)
53	E_SIN	I	DSP3B Emulation Serial Data In
54	E_CLK	I	DSP3B Emulation Serial Clock
55	E_ENB	I	DSP3B Emulation Port Enable Signal
56	E_DRB	I	DSP3B Emulation Debug Request Signal
57	GND	-	GND
58	SERVOCLK	O	DSP3B CLOCK INVERTED OUTPUT
59	SERVOCLK	I	DSP3B CLOCK
60	E_SOUT	O	DSP3B Emulation Serial Data Out
61	VDD	-	VDD
62	E_ST0	O	DSP3B EMUL STATUS 0
63	E_ST1	O	DSP3B EMUL STATUS 1
64	E_ST2	O	DSP3B EMUL STATUS 2
65	GND	-	GND
66	GPIO7	I/O	SERVO DSP GENERAL I/O:DSP_SENSE
67	GPIO6	I/O	SERVO DSP GENERAL I/O
68	GPIO5	I/O	SERVO DSP GENERAL I/O
69	GPIO4	I/O	SERVO DSP GENERAL I/O
70	VDD	-	VDD
71	GPIO3	I/O	SERVO DSP GENERAL I/O
72	GPIO2	I/O	SERVO DSP GENERAL I/O
73	GPIO1	I/O	SERVO DSP GENERAL I/O
74	GPIO0	I/O	SERVO DSP GENERAL I/O
75	CAPB2	-	DAC Bottom Coupling Cap Port for DAC 2
76	CAP_VCM	I	DAC Internal Reference voltage
77	CAPB1	-	DAC Bottom Coupling Cap Port for DAC 1
78	CAPB0	-	DAC Bottom Coupling Cap Port for DAC 0
79	REF_OUT	O	DAC Reference OUTPUT
80	AOUT2	O	SERVO D/A OUT2
81	AVDD	-	AVDD : DAC10BIT
82	AVDD	-	AVDD : DAC10BIT

Pin No.	Pin Name	I/O	Description
83	CAPT2	-	DAC Top Coupling Cap Port for DAC 2
84	AOUT1	O	SERVO D/A OUT1
85	AGND	-	AGND : DAC10BIT
86	AGND	-	AGND : DAC10BIT
87	CAPT1	-	DAC Top Coupling Cap Port for DAC 1
88	AOUT0	O	SERVO D/A OUT0
89	CAPT0	-	DAC Top Coupling Cap Port for DAC 0
90	ADCVCM	I	ADC Swing Reference (AVDD/2) (use 1uF,10
91	VREFN	I	ADC bottom voltage
92	VREFP	I	ADC top voltage
93	CH0	I	ADC Input channel 0
94	CH1	I	ADC Input channel 1
95	CH2	I	ADC Input channel 2
96	CH3	I	ADC Input channel 3
97	CH4	I	ADC Input channel 4
98	AGND	-	AGND : ADC10BIT
99	AGND	-	AGND : ADC10BIT
100	CH5	I	ADC Input channel 5
101	AVDD	-	AVDD : ADC10BIT
102	AVDD	-	AVDD : ADC10BIT
103	REFBIAS1	I	Test pin for adjusting the bias level, e
104	REF	I	ADC REF BIAS
105	TESTOUT1	I/O	TEST OUT (Default 0)
106	TESTOUT1	I/O	TEST OUT (Default 0)
107	TESTOUT1	I/O	TEST OUT (Default 0)
108	TESTOUT1	I/O	TEST OUT (Default 0)
109	TESTOUT1	I/O	TEST OUT (Default 0)
110	TESTOUT1	I/O	TEST OUT (Default 0)
111	GND	-	GND
112	RAMTO7	O	Internal RAM Test Out
113	RAMTO6	O	Internal RAM Test Out
114	RAMTO5	O	Internal RAM Test Out
115	RAMTO4	O	Internal RAM Test Out
116	RAMTO3	O	Internal RAM Test Out
117	RAMTO2	O	Internal RAM Test Out
118	RAMTO1	O	Internal RAM Test Out
119	RAMTO0	O	Internal RAM Test Out
120	VDD	-	VDD
121	SENS	O	SERVO DSP INTERNAL STATUS MONITOR
122	VDD	-	VDD : PLL
123	LRCK	O	Audio DAC FS Output

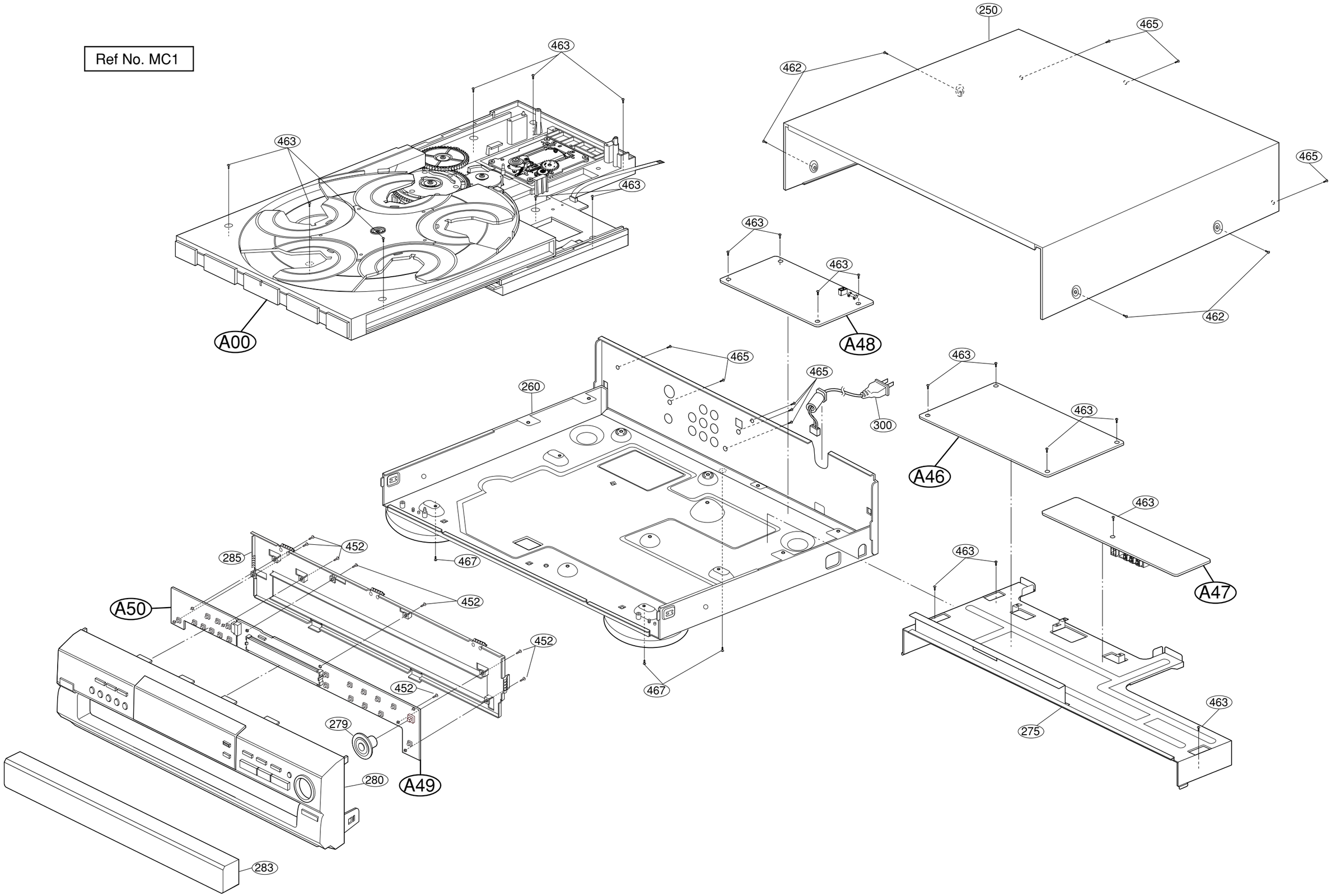
Pin No.	Pin Name	I/O	Description
124	GND	-	GND : PLL
125	ADAT	O	Audio DAC Audio data Output
126	BCLK	O	Audio DAC FS48 Output
127	EXCK	I	CD Sub Data Request clock
128	AGND	-	AGND : PLL
129	SQCK	I	CD SubQ data Request clock
130	AVDD	-	AVDD : PLL
131	C16M	O	CD Audio DAC FS384 Output(16.9344MHz)
132	COUT	O	CNIN Signal
133	GND	-	GND
134	PWMCH1	O	PWM CHANNEL1(x3 CARRIER)
135	PWMCH2	O	PWM CHANNEL1(x3 CARRIER)
136	PWMCH3	O	PWM CHANNEL1(x3 CARRIER):SLED DRIVE OUTP
137	XTO	O	Inverted 33.8688MHz
138	XTI	I	33.8688 MHz
139	PWMCH4	O	PWM CHANNEL1(x1 CARRIER):PDO_CTR PWM OUT
140	PWMCH5	O	PWM CHANNEL1(x1 CARRIER):RF_GAIN_CTL PWM
141	PWMCH6	O	PWM CHANNEL1(x1 CARRIER):TE_BAL_CTL PWM
142	VDD	-	VDD
143	FG1	I	SLED ENCODER1 INPUT
144	FG2	I	SLED ENCODER2 INPUT
145	GND	-	GND
146	DVDC16M	I	DVD FS384 INPUT
147	DVDLRCK	I	DVD FS INPUT
148	DVDADAT	I	DVD Audio data INPUT
149	DVDBCLK	I	DVD FS48 INPUT
150	TZC	I	TRACK CROSS PULSE 2 INPUT
151	MIRR	I	TRACK CROSS PULSE 1 INPUT
152	FOK	O	INTERNAL GENERATED FOK(Focus OK) H=OK
153	DEFECT	O	INTERNAL GENERATED DEFECT : H=DEFECT
154	FG	O	(SL_ENC1) XOR (SL_ENC2)
155	C_SIG	O	TRACK CROSS PULSE
156	HINT	O	SERVO DSP INTERRUPT
157	VDD	-	VDD : ADC6BIT
158	GND	-	GND : ADC6BIT
159	AGND	-	Analog GND : ADC6BIT
160	AGND	-	Analog GND : ADC6BIT
161	VRT	I	6 bit ADC TOP voltage
162	AVDD	-	Analog VDD : ADC6BIT
163	AVDD	-	Analog VDD : ADC6BIT
164	AD6_REFB	I	6 bit ADC REF BIAS

Pin No.	Pin Name	I/O	Description
165	RF	I	6 bit ADC channel Input
166	VRM	I	6 bit ADC Center voltage
167	VRB	I	6 bit ADC bottom voltage
168	MDS	O	Spindle motor control signal
169	MDP	O	Spindle motor control signal
170	MON	O	Spindle motor ON/OFF control signal
171	FG_M	I	Spindle FG input
172	ZINT	O	interrupt request to Host
173	ZRD	I	read strobe from HOST
174	ZWR	I	write strobe from HOST
175	ZCS	I	chip select from HOST
176	GND	-	GND
177	WAIT	O	Micom Wait Signal output
178	VDD	-	VDD
179	A0	I	internal register address from HOST
180	A1	I	internal register address from HOST
181	A2	I	internal register address from HOST
182	A3	I	internal register address from HOST
183	A4	I	internal register address from HOST
184	A5	I	internal register address from HOST
185	GND	-	GND
186	RESET	I	Hardware Reset
187	PS0	I/O	bi-directional data to Host
188	VDD	-	VDD
189	PS1	I/O	bi-directional data to Host
190	PS2	I/O	bi-directional data to Host
191	PS3	I/O	bi-directional data to Host
192	PS4	I/O	bi-directional data to Host
193	PS5	I/O	bi-directional data to Host
194	PS6	I/O	bi-directional data to Host
195	PS7	I/O	bi-directional data to Host
196	REQ_MPEG	I	DVD: data request from MPEG
197	MPEG0(AD	O	DVD:MPEG data0, CD: ADDAT
198	MPEG1(LR	O	DVD:MPEG data1, CD: LRCK
199	MPEG2(AB	O	DVD:MPEG data2, CD: ABSCLK
200	MPEG3(C2	O	DVD:MPEG data3, CD: C2PO
201	MPEG4(SB	O	DVD: MPEG data4, CD: SBSO
202	MPEG5(WF	O	DVD: MPEG data5, CD: WFCK
203	MPEG6(SC	O	DVD:MPEG data6, CD: SCOR
204	MPEG7	O	MPEG data7
205	SENB	O	MPEG data valid signal

Pin No.	Pin Name	I/O	Description
206	SDCLK /	O	MPEG data transfer clock / CD : C16M
207	SERR / S	O	MPEG data error detection signal / CD :
208	SYNC / D	O	MPEG data sector sync. Signal / CD : DOT

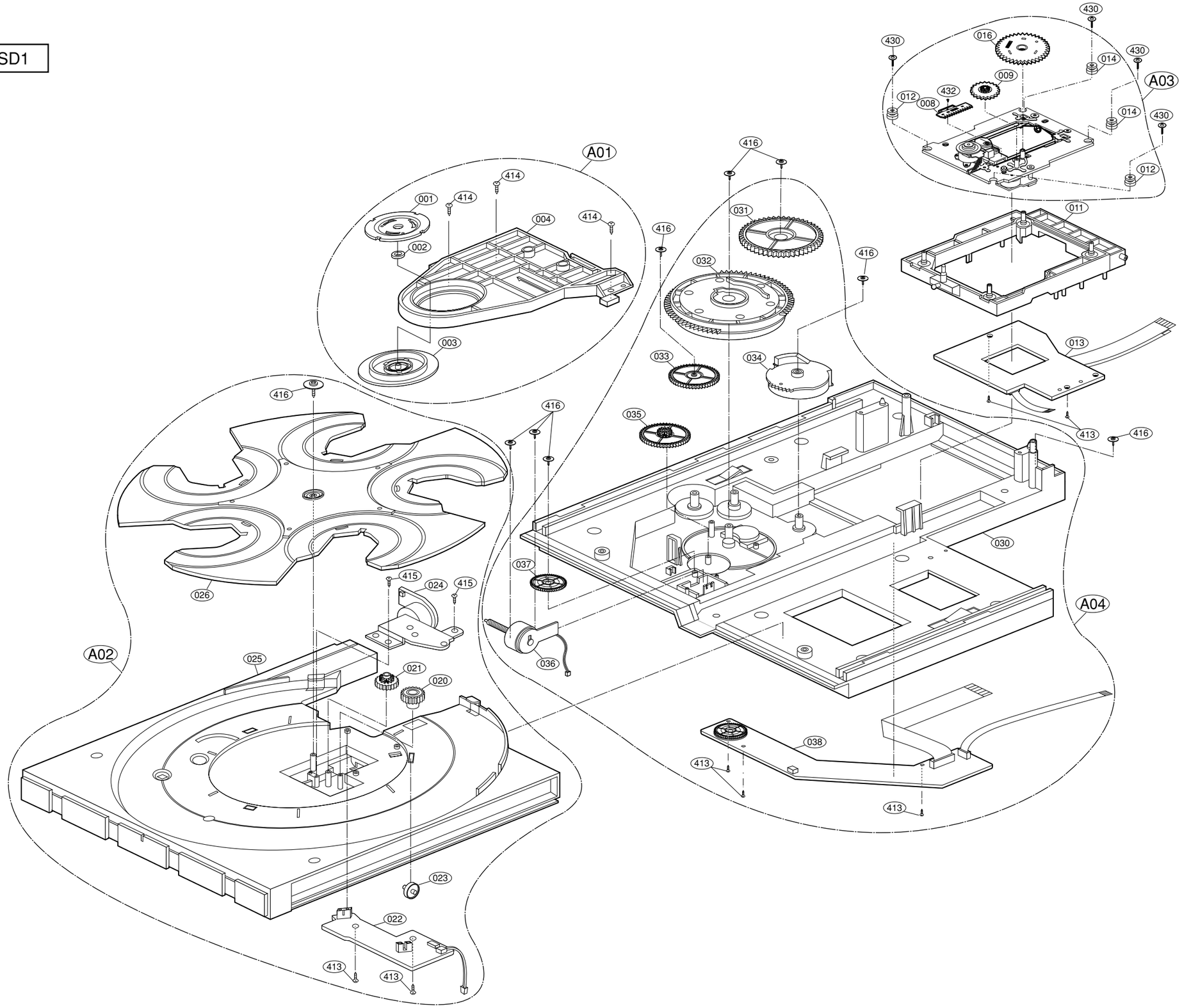
MECHANICAL EXPLODED VIEW -1/1

Ref No. MC1



DVD MECHANISM EXPLODED VIEW -1/1 (DP-M2)

Ref No. SD1



MECHANICAL, MECHANISM PARTS LIST -1/1

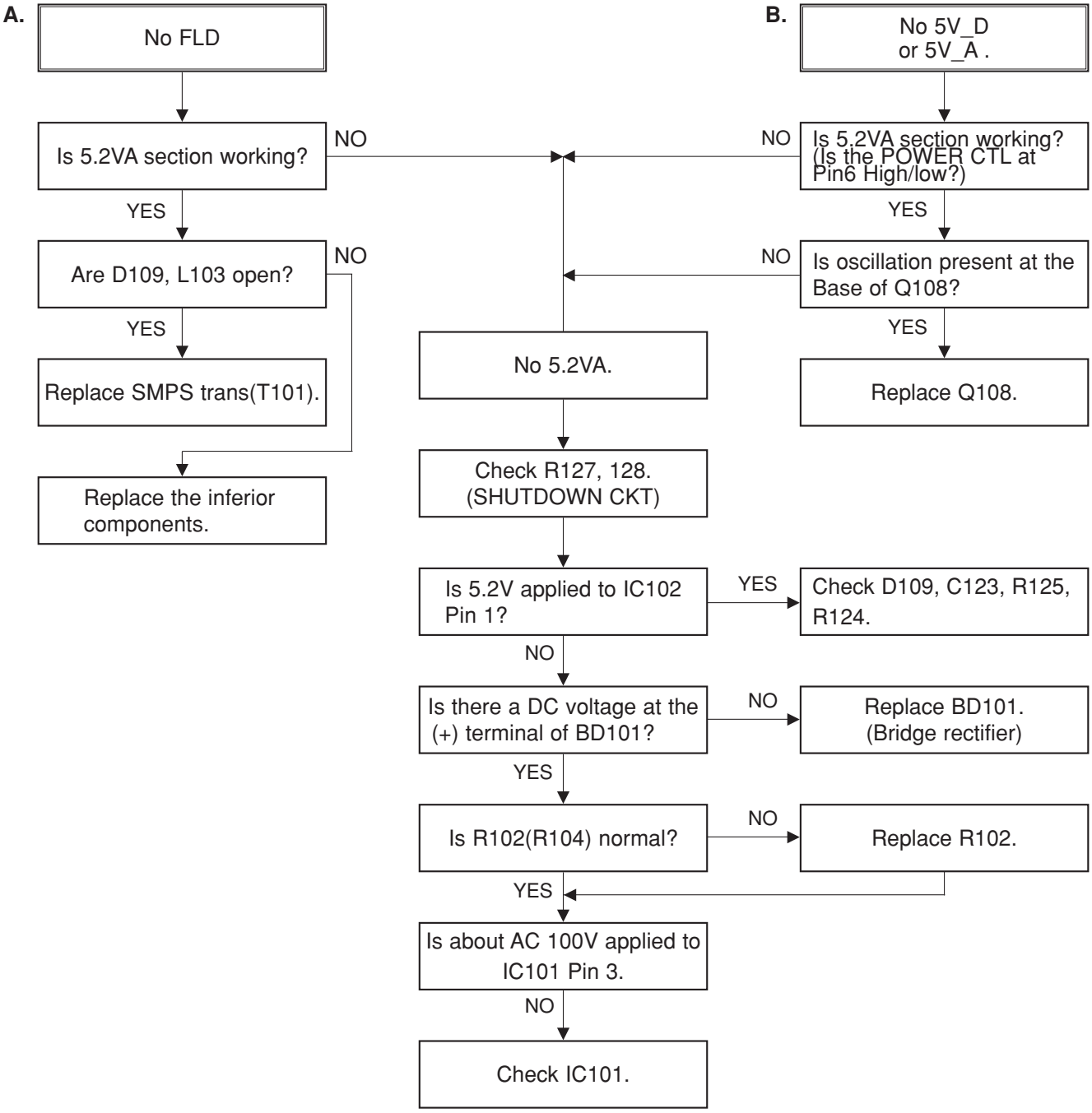
! = ⚠ SAFTY PARTS
C = Components marked
All components used on this model at the production line are shown in this service manual.
However, please note that not all components will be available as spare parts for after-sales service.
Components marked S and O are designated as spare parts for service and will be stocked at the spare parts centers.
Components marked X and R are not designated as spare parts for after sales service, and will not be stocked at the spare parts centers.

UNIT-NAME	!	C	REF-NO	PARTS-NO	PARTS-NAME	SUFFIX&MODEL
						XD-SPM823 UBC1
		O	MC1250	S1-10R-019-4G0	CASE,TOP	a
		O	MC1260	S1-41R-005-9Q0	CHAS ASSY,DVD DMP5022N HA1UAA	a
		O	MC1262	S9-30R-021-2A0	HOLDER BRACKET(DVM3800)	a
		O	MC1275		BRACKET	a
		O	MC1279	S9-40R-Z07-3B0	KNOB,NAVIGATION DMA5024N HA1U	a
		O	MC1280	S7-21R-F20-5B0	PANEL ASSY,FRONT[NORMAL PA DM	a
		O	MC1283	S5-81R-T01-8B0	DOOR ASSY,DVD DMA5024N TRAY H	a
		X	MC1285	S3-01R-M01-3B0	PLATE ASSY,SHIELD	a
	!	O	MC1300	S4-10R-AHJ-02Z	POWER CORD JL001/NISPT-2 18AW	a
		O	MC1452	S3-530-51A-000	SCREW,SPECIAL	a
		O	MC1455	87-741-097-410	SCREW,3-12	a
		O	MC1462	S5-308-5E0-000	SCREW,+4-10	a
		O	MC1463	S3-530-51G-000	SCREW,DRAWING + 2 3-8	a
		O	MC1465	S3-530-46K-000	SPECIAL SCREW 3-10 B.K	a
		O	MC1467	S3-530-46N-000	SPECIAL SCREW 3-8 BK	a
		O	MC1A00	S7-21R-H03-26A	DECK ASSY,VIDEO DPM-2 (DVD-CD	a
		X	MC1A43	S5-01R-F12-58B	BOARD ASSY,DMA5024N HA1UAA	a
		X	MC1A46	S8-85R-055-0F0	SUB PWB ASSY,DMA5024N	a
		X	MC1A47	S8-71R-507-9A0	PWB ASSY,DMA5024N HA1UAA	a
		X	MC1A48	S8-71R-506-1A0	PWB ASSY,DMP5024N SH POWER(11	a
						XD-SPM823 UBC1
		X	MC1A49	S8-71R-507-3A0	PWB ASSY,DMA5024N HA1UAA	a
		X	MC1A50	S8-71R-507-2A0	PWB ASSY,DMA5024N HA1UAA	a
		O	SD1001	S3-00R-054-7A0	PLATE CLAMP	a
		X	SD1002	S0-16H-101-6B0	CLAMP MAGNET 8,10-5,1-1.5	a
		X	SD1003	S8-60R-000-9A0	CLAMP,UPPER	a
		X	SD1004	S9-30R-019-7A0	HOLDER,CLAMP	a
		O	SD1008	S4-70R-004-7A0	GEAR ASSY,RACK	a
		O	SD1009	S4-70R-005-3A0	GEAR,MIDDLE	a
		O	SD1011	S2-10R-004-1A0	FRAME,UP/DOWN	a
		O	SD1012	S0-40R-004-7D0	RUBBER DAMPER,DARK GR	a
		X	SD1013	S8-71R-000-1K0	PWB ASSY,DPM1 JUNCTION DVD-CD	a
		O	SD1014	S0-40R-004-7B0	RUBBER DAMPER	a
		O	SD1016	S4-70R-005-0A0	GEAR ASSY,FEED	a
		O	SD1020	S4-70R-011-8A0	GEAR WHEEL,TRAY	a
		O	SD1021	S4-70R-007-4A0	GEAR,TRAY	a
		X	SD1022	S8-71R-302-4D0	PWB ASSY,DPM1 TRAY -SH	a
		O	SD1023	S5-80R-000-6A0	ROLLER BASE,TRAY	a
		O	SD1024	S6-81R-001-0D0	MOTOR ASSY,TRAY-SH	a
		X	SD1025	S0-40R-003-2A0	BASE,TRAY (DPM1)	a
		O	SD1026	S3-90R-000-8A0	TRAY,DISC (DPM1)	a
						XD-SPM823 UBC1
		X	SD1030	S0-40R-003-1A0	BASE,MAIN (DPM1)	a
		O	SD1031	S4-70R-006-9A0	GEAR,SLIDER	a
		O	SD1032	S4-70R-006-7A0	GEAR,MAIN	a
		O	SD1033	S4-70R-007-0A0	GEAR,EXCHANGE	a
		O	SD1034	S4-70R-006-8A0	GEAR,UP/DOWN	a
		O	SD1035	S4-70R-007-1A0	GEAR,LOADING	a
		O	SD1036	S6-81R-001-2B0	MOTOR ASSY,MAIN -SH	a
		O	SD1037	S4-70R-007-2A0	GEAR,WHEEL MAIN	a
		X	SD1038	S8-71R-302-6C0	PWB ASSY,DPM1 MAIN-MODE -SH	a
		O	SD1413	S0-00R-000-6A0	SCREW,TAPTITE 3-8	a
		O	SD1414	S0-00R-000-6B0	SCREW,TAP 3X10 FBK	a
		O	SD1415	SM-PC0-301-118	SCREW,MACHINE PAN HEAD	a
		X	SD1416	S4-04R-001-7A0	MECHANISM,3*12*12(88H-0004)	a
		O	SD1430	SS-ZZH-100-3A0	SCREW,+D2.0-6MM	a
		O	SD1432	SS-ZZR-001-1A0	SCREW,MACHINE	a
		O	SD1A01	S9-31R-003-7B0	HOLDER ASSY,CLAMP-SH	a
		O	SD1A02	S0-41R-001-4C0	BASE ASSY,TRAY(DPM1)-SH	a
		O	SD1A03	S0-41R-006-1B0	BASE ASSY,SLED-DAMPER(DVD-CD	a
		O	SD1A04	S0-41R-001-6B0	BASE ASSY,MAIN-SH	a

COLOR NAME TABLE -1/1

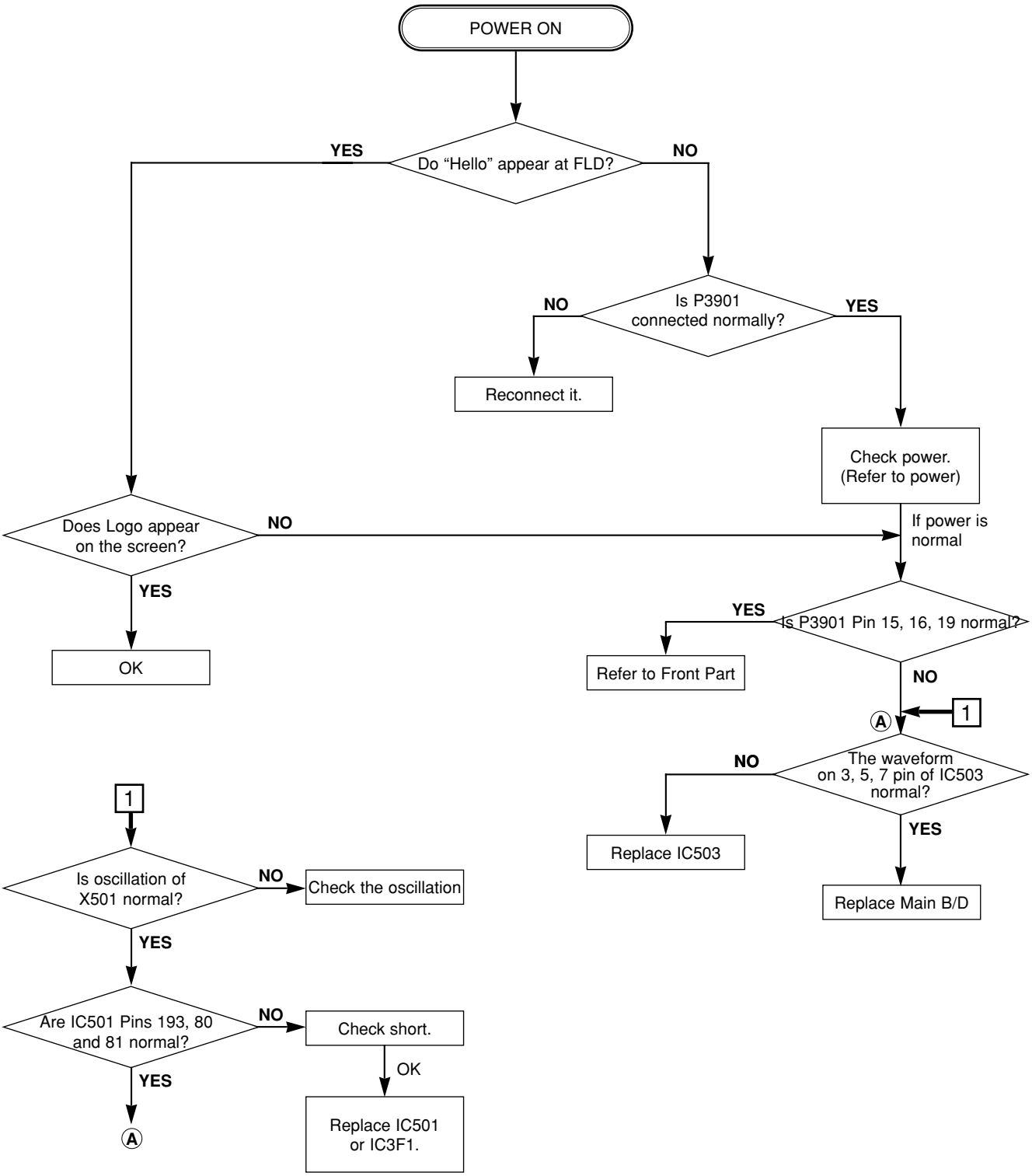
Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange	GM	Metallic Green
YM	Metallic Yellow	DM	Metallic Orange	PT	Transparent Pink
LA	Aqua Blue	GL	Light Green	HT	Transparent Gray
HM	Metallic Gray	NH	Champagne Gold	M	Wood Pattern

1. Power(SMPS) Circuit

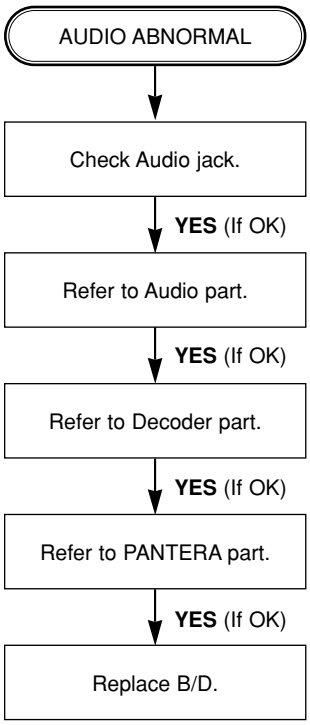


2. µ-COM Circuit

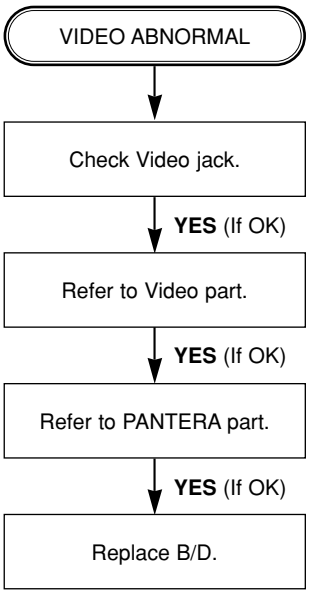
A. No Power



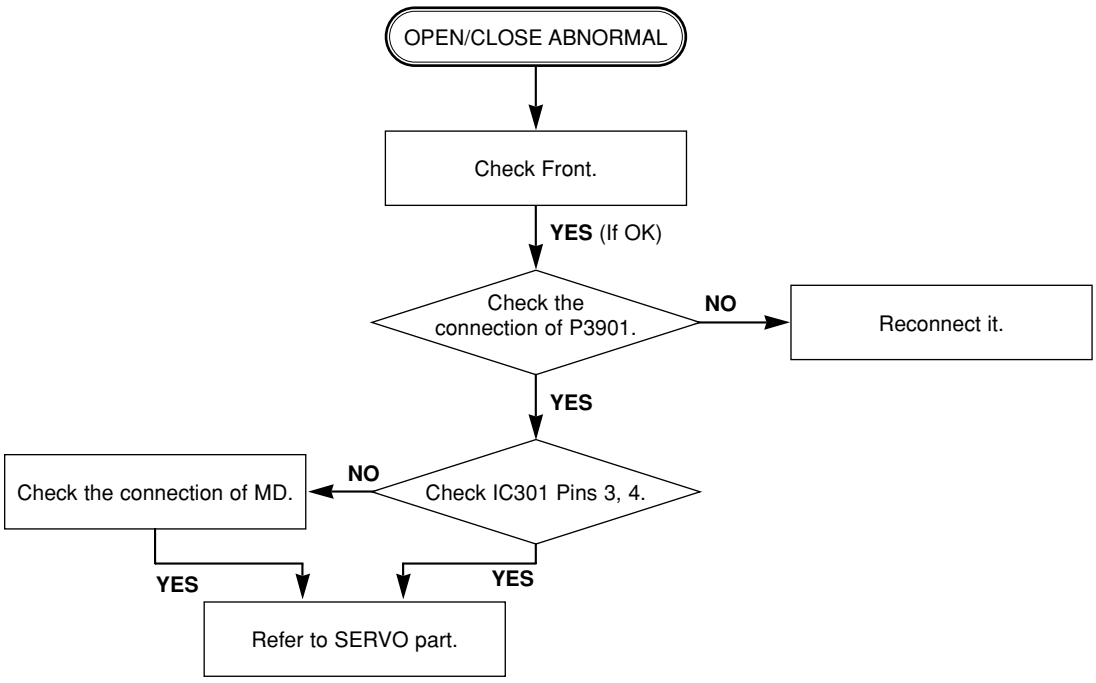
B. Audio abnormal



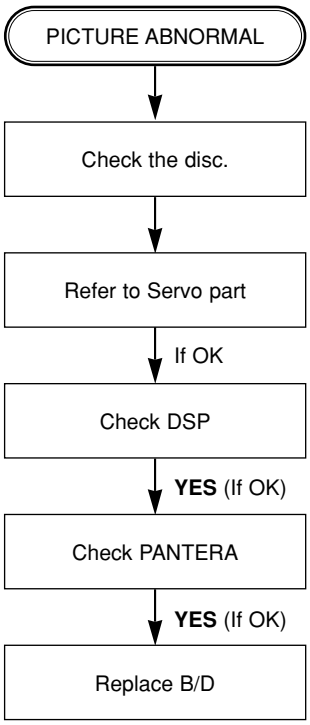
C. Video abnormal



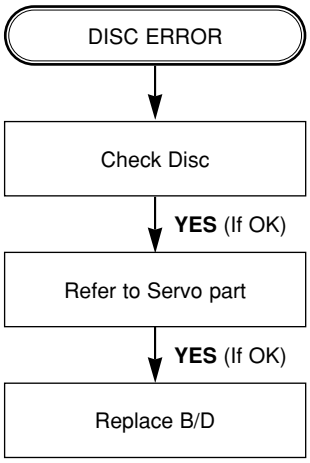
D. Open/Close abnormal



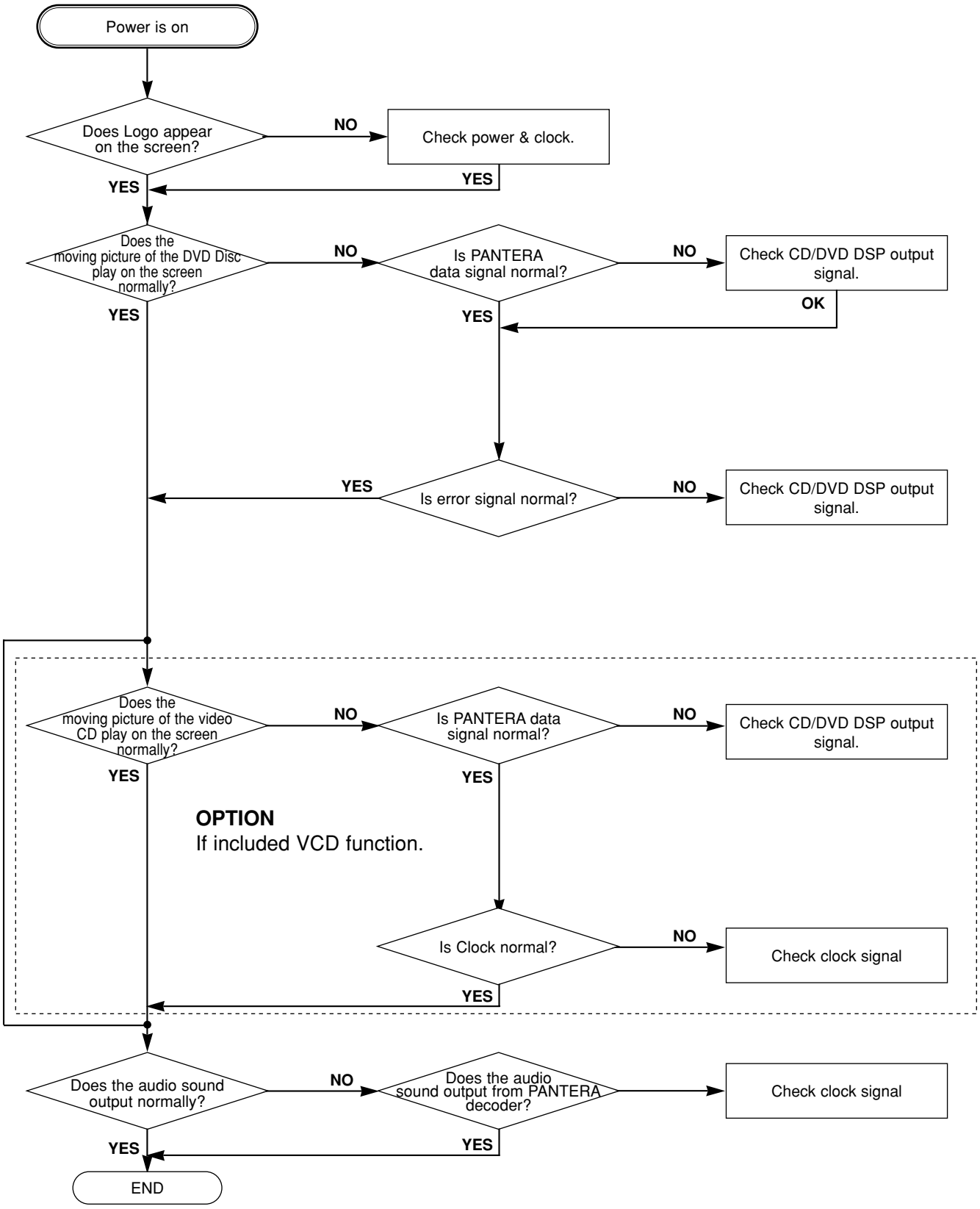
E. Picture abnormal



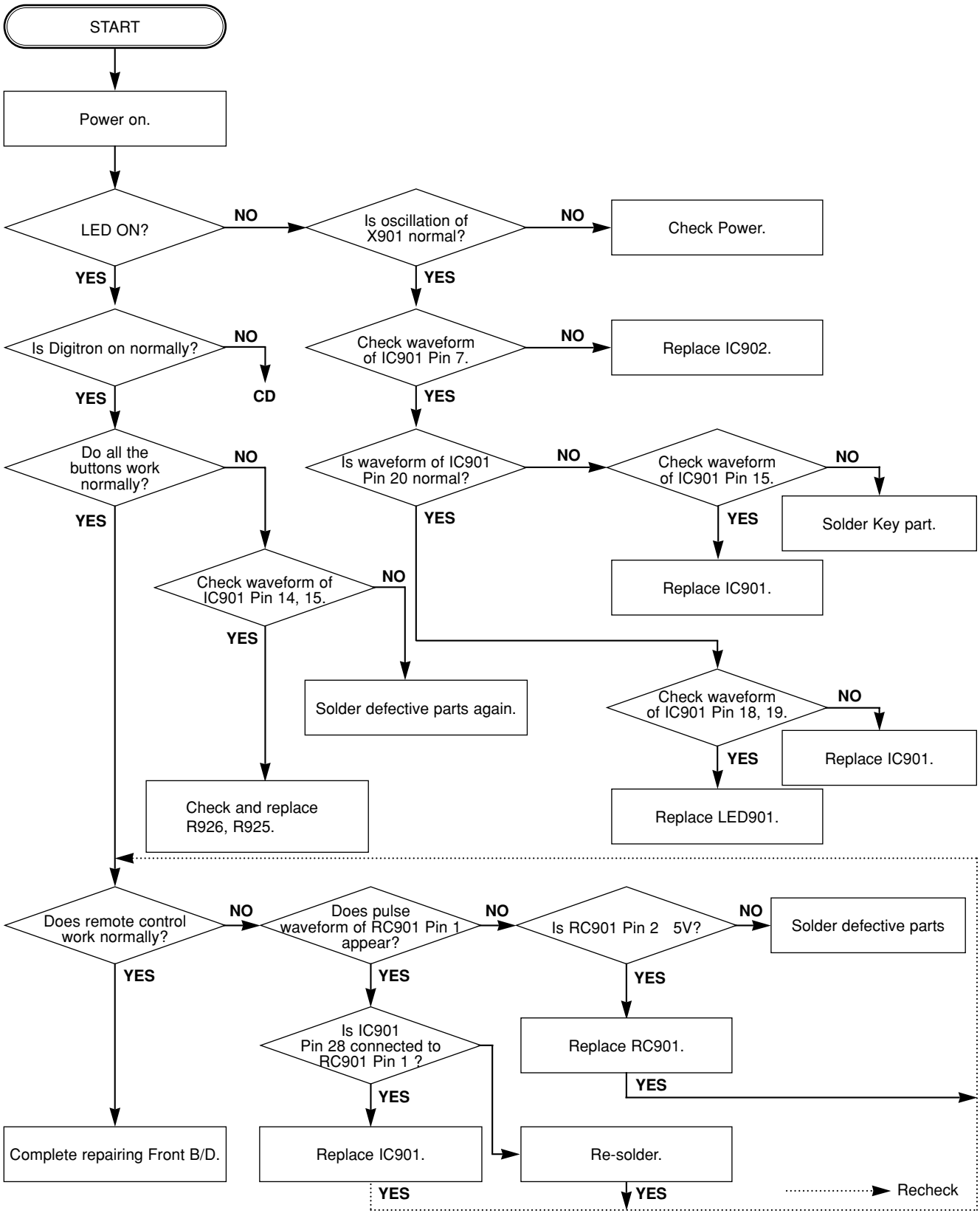
F. Disc Error



3. PANTERA Circuit

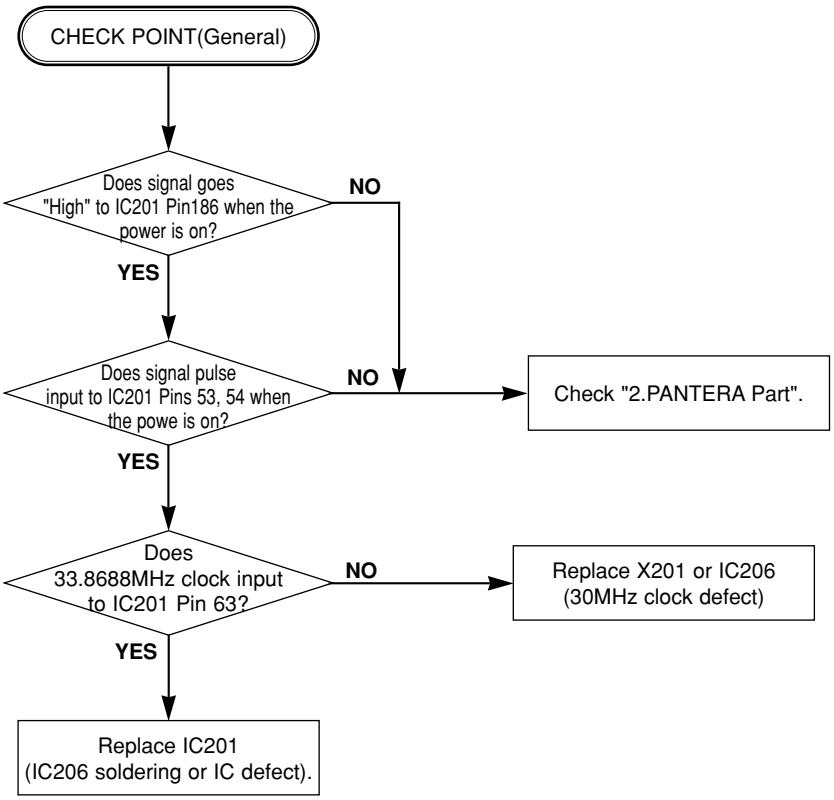


4. Front Circuit (Digitron & key)

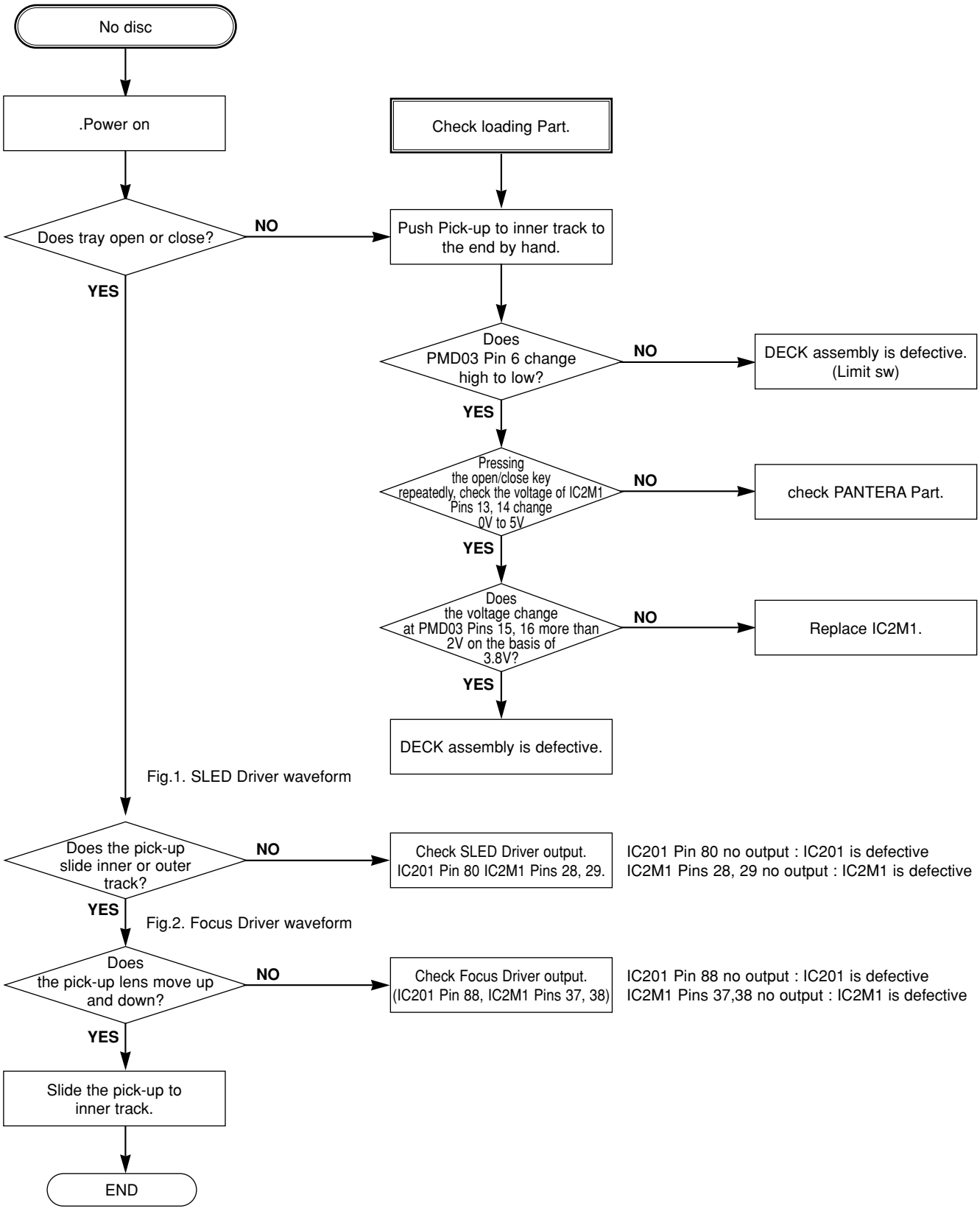


5. RF/Servo Circuit

A.


CHECK POINT(General)
Does signal goes "High" to IC201 Pin186 when the power is on?
NO
YES
Does signal pulse input to IC201 Pins 53, 54 when the powe is on?
NO
Check "2.PANTERA Part".
YES
Does 33.8688MHz clock input to IC201 Pin 63?
NO
Replace X201 or IC206 (30MHz clock defect)
YES
Replace IC201 (IC206 soldering or IC defect).

B.


No disc
.Power on
Does tray open or close?
NO
YES
Check loading Part.
Push Pick-up to inner track to the end by hand.
Does PMD03 Pin 6 change high to low?
NO
DECK assembly is defective. (Limit sw)
YES
Pressing the open/close key repeatedly, check the voltage of IC2M1 Pins 13, 14 change 0V to 5V
NO
check PANTERA Part.
YES
Does the voltage change at PMD03 Pins 15, 16 more than 2V on the basis of 3.8V?
NO
Replace IC2M1.
YES
DECK assembly is defective.
Fig.1. SLED Driver waveform
Does the pick-up slide inner or outer track?
NO
Check SLED Driver output. IC201 Pin 80 IC2M1 Pins 28, 29.
IC201 Pin 80 no output : IC201 is defective
IC2M1 Pins 28, 29 no output : IC2M1 is defective
YES
Fig.2. Focus Driver waveform
Does the pick-up lens move up and down?
NO
Check Focus Driver output. (IC201 Pin 88, IC2M1 Pins 37, 38)
IC201 Pin 88 no output : IC201 is defective
IC2M1 Pins 37,38 no output : IC2M1 is defective
YES
Slide the pick-up to inner track.
END

C.

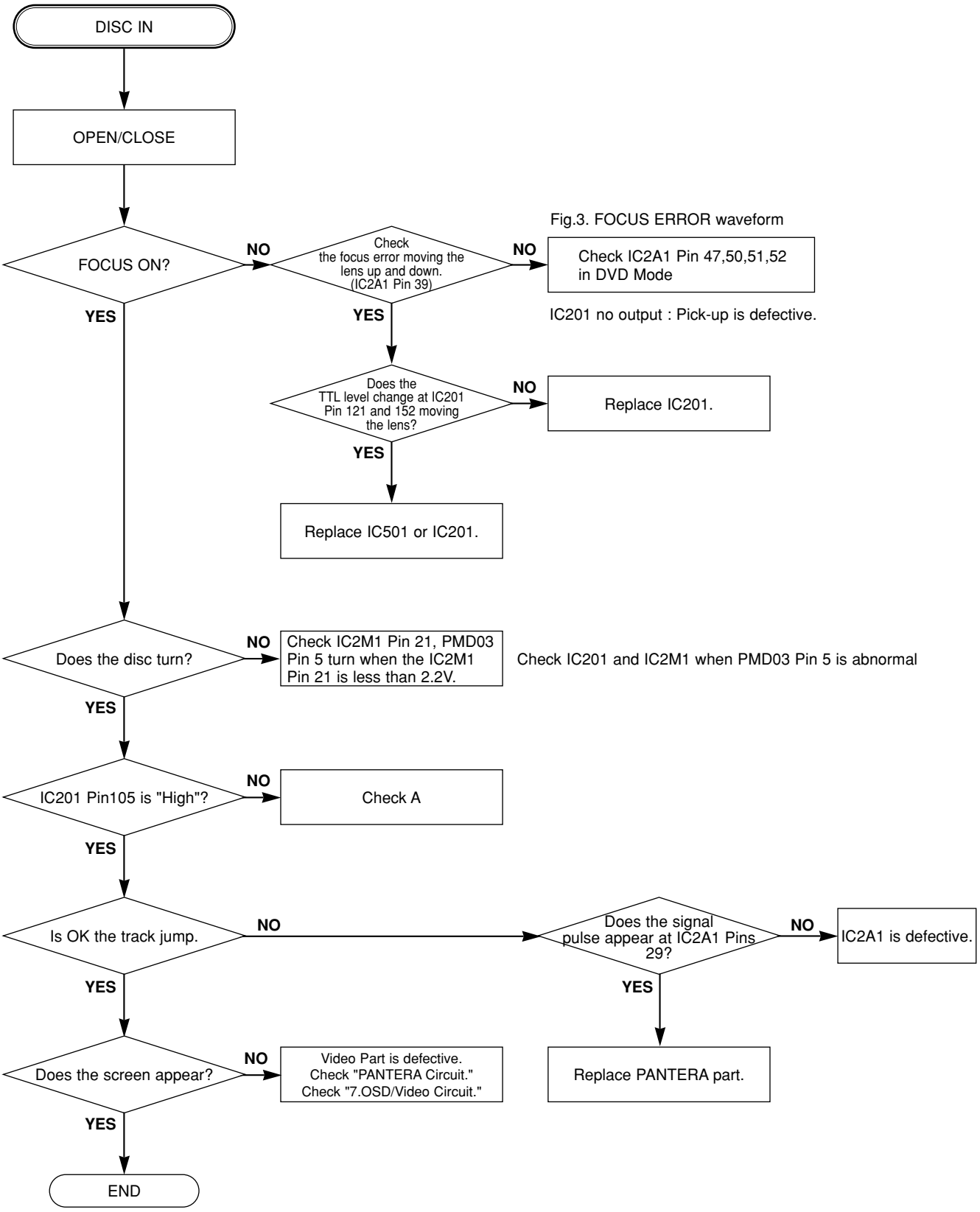
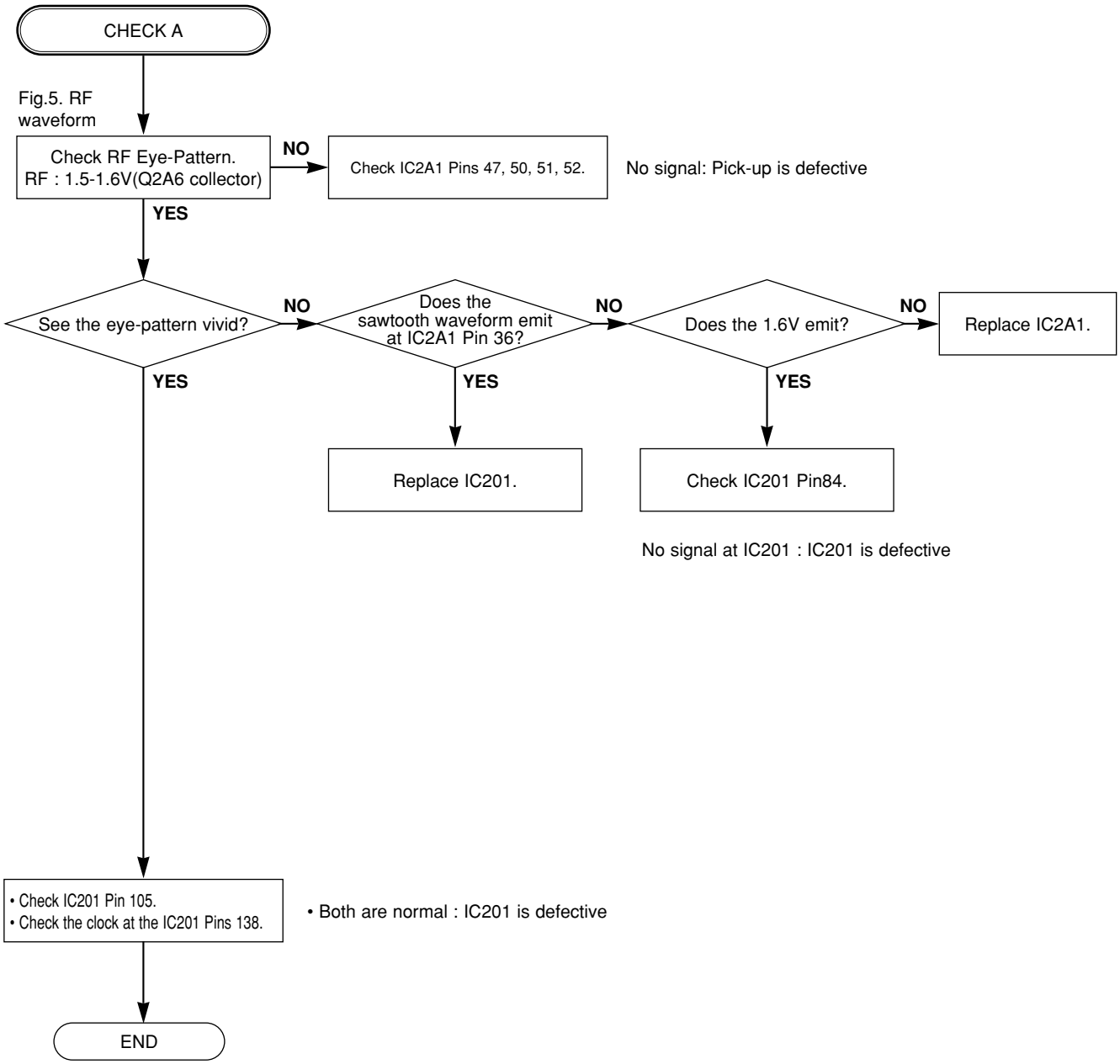


Fig.3. FOCUS ERROR waveform

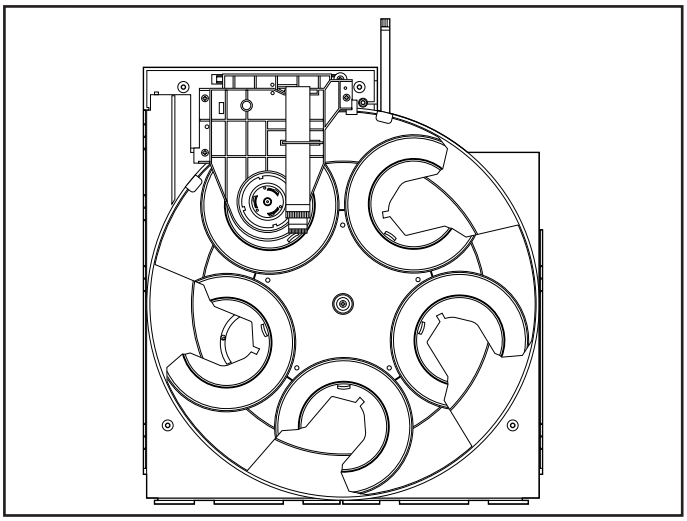
IC201 no output : Pick-up is defective.

Check IC201 and IC2M1 when PMD03 Pin 5 is abnormal

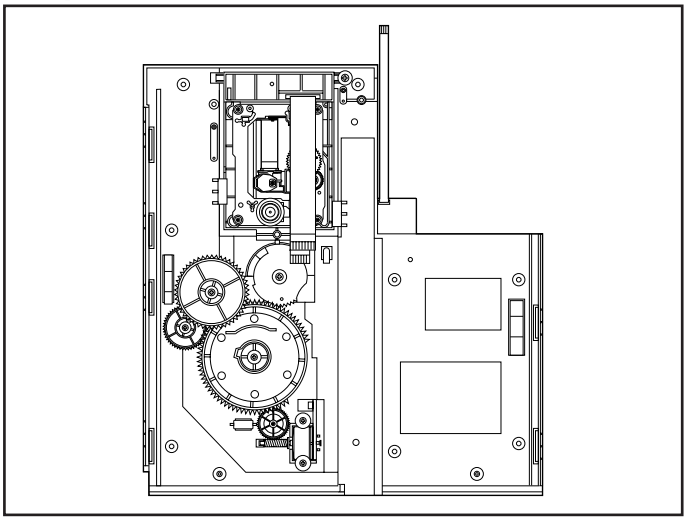
D.


CHECK A
Fig.5. RF waveform
Check RF Eye-Pattern.
RF : 1.5-1.6V(Q2A6 collector)
NO
Check IC2A1 Pins 47, 50, 51, 52.
No signal: Pick-up is defective
YES
See the eye-pattern vivid?
NO
Does the sawtooth waveform emit at IC2A1 Pin 36?
NO
Does the 1.6V emit?
NO
Replace IC2A1.
YES
YES
YES
Replace IC201.
Check IC201 Pin84.
No signal at IC201 : IC201 is defective
• Check IC201 Pin 105.
• Check the clock at the IC201 Pins 138.
• Both are normal : IC201 is defective
END

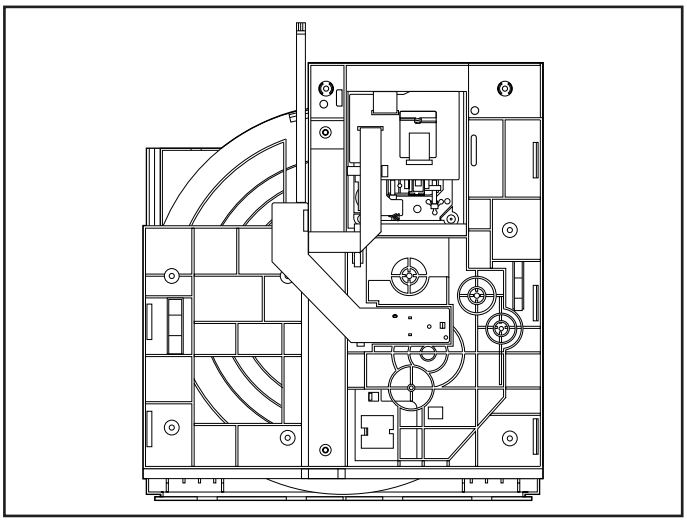
• Top View (With Tray)



• Top View (Without Tray)



• Bottom View



Procedure Starting No.		Parts	Fixing Type	Disassembly	Figure
	1	Holder Assembly Clamp	3 Screws 2 Connectors 1 Hook	Top	4-1
1	2	Plate Calmp		Top	4-1
1,2	3	Magnet Clamp		Top	4-1
1,2,3	4	Upper Clamp		Top	4-1
1,2,3,4	5	Holder Clamp		Top	4-1
	6	Base Assembly Tray	2 Locking Tabs	Top	4-2
	7	Tray Disc	1 Screw	Top	4-2
6	8	Roller Base Tray	2 Locking Tabs	Bottom	4-2
6	9	PCB Assembly Tray	2 Screws 1 Connector	Bottom	4-2
6,7	10	Motor Assembly Tray	2 Screws	Top	4-2
6,7,10	11	Gear Tray		Top	4-2
6,7,10,11	12	Gear Wheel Tray		Top	4-2
6,7,8,9,10, 11,12	13	Base Tray		Top	4-2
1	14	Frame Assemly Up/Down	1 Screw	Top	4-3
	15	PCB Assembly Junction	2 Screws 5 Connectors	Bottom	4-3
1	16	Base Assembly Sled Damper	4 Screws 1 Connector	Top	4-3
1	17	Gear Assembly Feed	1 Locking Tab	Top	4-3
1,17	18	Gear Middle		Top	4-3
1,17	19	Gear Assembly Rack	1 Screw	Top	4-3
1	20	Rubber Damper		Top	4-3
1,15,16,17, 18,19,20	21	Frame Up/Down		Top	4-3
1,14	22	Base Assembly Main		Top	4-4
	23	PCB Assembly Main Mode	2 Connectors 3 Screws	Bottom	4-4
6	24	Gear Slider	1 Screw	Top	4-4
6,24	25	Gear Exchange	1 Screw	Top	4-4
6,24	26	Gear Main	1 Screw	Top	4-4
6,24,26	27	Gear Up/Down	1 Screw	Top	4-4
6,24,26	28	Gear Wheel Main	1 Screw	Top	4-4
6,24,26,28	29	Gear Loading		Top	4-4
6,28	30	Motor Assembly Main	2 Screws 1 Locking Tab	Top	4-4
1,6,14,23, 24,25,26, 27,28,29, 30	31	Base Main		Top	4-4

Note

When reassembling, perform the procedure in reverse order.

The “Bottom” on Disassembly column of above Table indicates the part should be disassembled at the Bottom side.

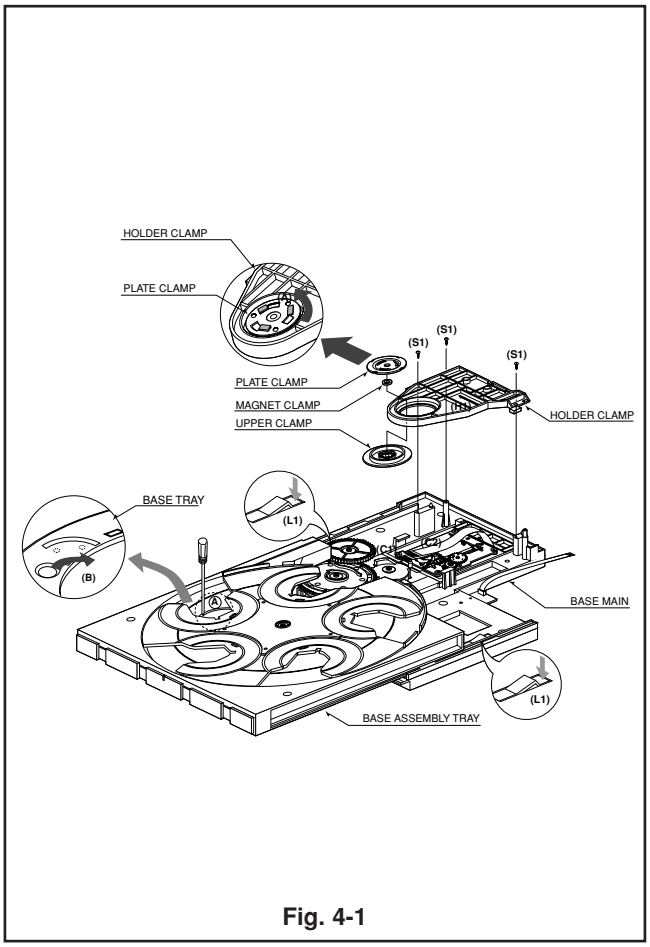


Fig. 4-1

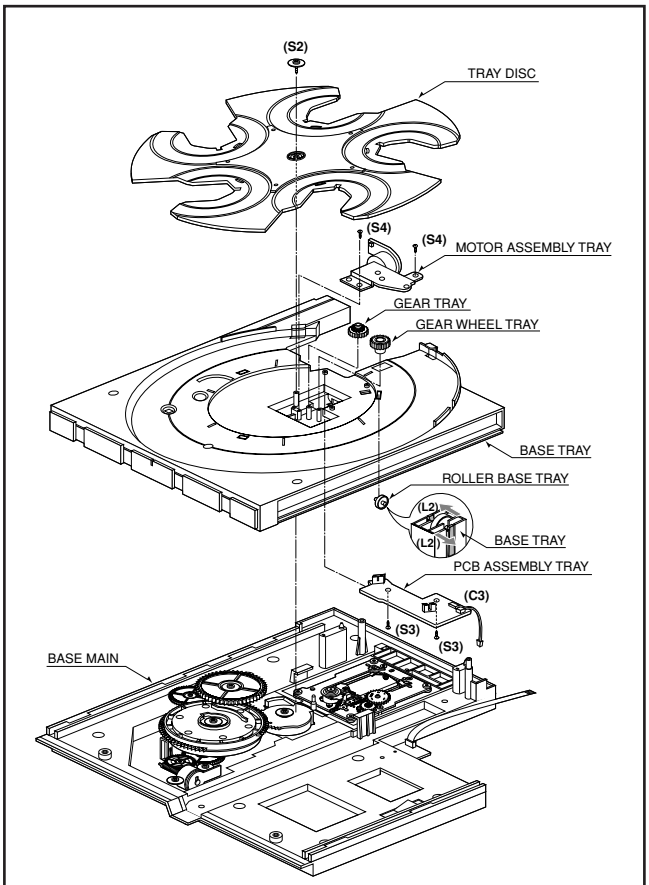


Fig. 4-2

1. Holder Assembly Clamp(Fig. 4-1)

1) Release 3 Screws(S1).
2) Unlock The Connectors (C1), (C2) from the Hook(H1).

1-1. Plate Clamp

1) Hold and fix the Upper Clamp under the Holder Assembly Clamp, and then turn the Plate Clamp to the counterclockwise direction(arrow(A)).

1-2. Magnet Clamp

1-3. Upper Clamp

1-4. Holder Clamp

Note

• When reassembling, hold and fix the Upper Clamp as above No. 1-1(1), and then turn the Plate Clamp to the clockwise direction.

2. Base Assembly Tray(Fig. 4-1)

1) Turn the Ⓐ portion to the direction of arrow(B) to move the Base Assembly Tray in front of you.
2) Push down two Locking Tabs(L1) located to both sides of the Base Main, and then pull the Base Assembly Tray in fornt of you.

2-1. Tray Disc(Fig.4-2)

1) Release Screw(S2).

Note

• Put the Base Assembly Tray face down(Bottom side).

2-2. Roller Base Tray

1) Unlock the two Locking Tabs(L2).

2-3. PCB Assembly Tray

1) Release two Screws(S3).
2) Unconnect the Connector(C3).

Note

• Put the Base Assembly Tray on original position(Top Side).

2-4. Motor Assembly Tray

1) Release 2 Screws(S4).

2-5. Gear Tray

2-6. Gear Wheel Tray

2-7. Base Tray

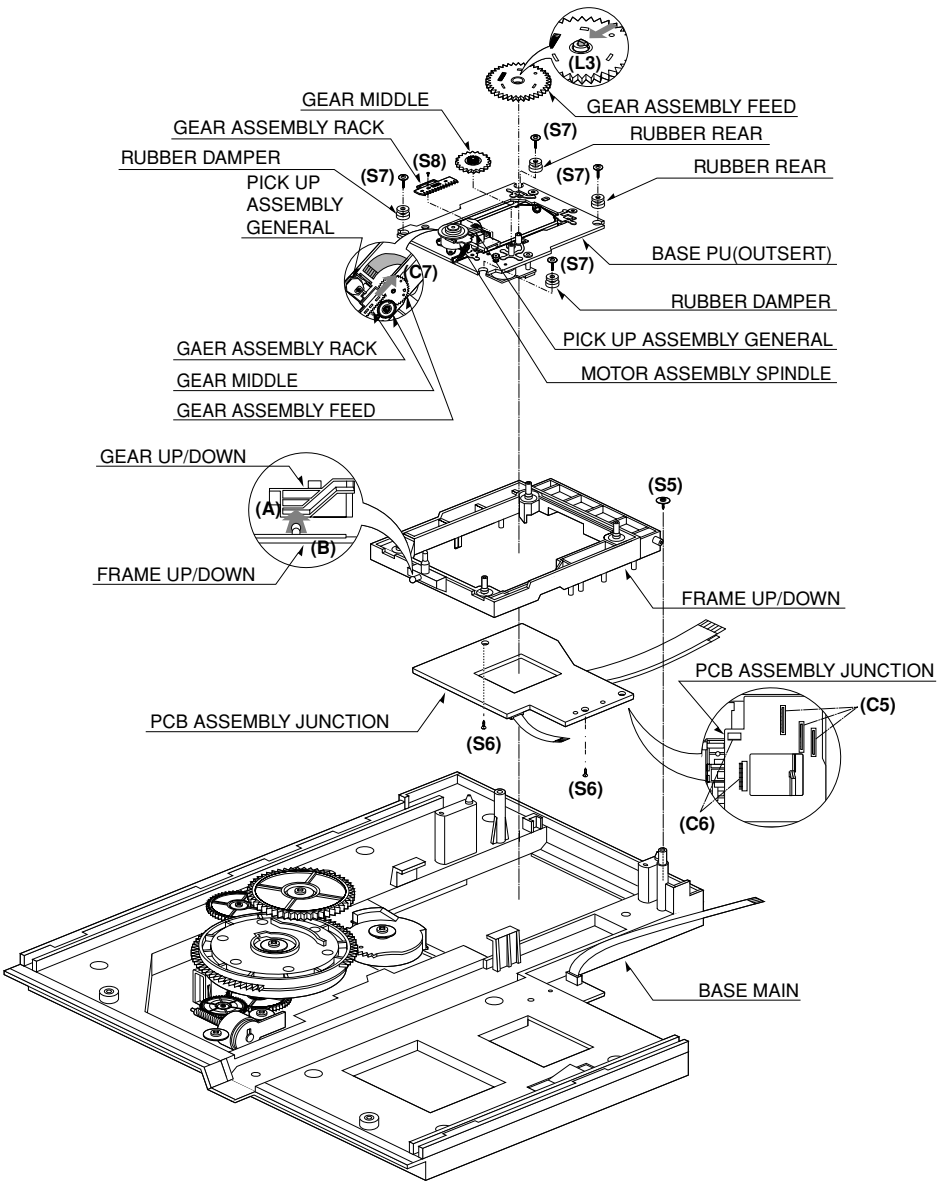


Fig. 4-3

3. Frame Assembly Up/Down(Fig. 4-3)

1) Release Screw(S5).

3-1. PCB Assembly Junction

1) Unconnect the 5 Connectors(C5), (C6).
2) Release 2 Screws(S6).

3-2. Base Assembly Sled Damper

Note

• Put the Base Assembly Main on original position(Top side)

1) Release 4 Screws(S7).
2) Disconnect the Connector(C7).

3-2-1. Gear Assembly Feed

1) Look the Locking Tab(L3) in direction of arrow.

3-2-2. Gear Assembly Middle

3-2-3. Gear Assembly Rack

1) Release the Screw(S8).

3-3. Rubber Damper

3-4. Frame Up/Down

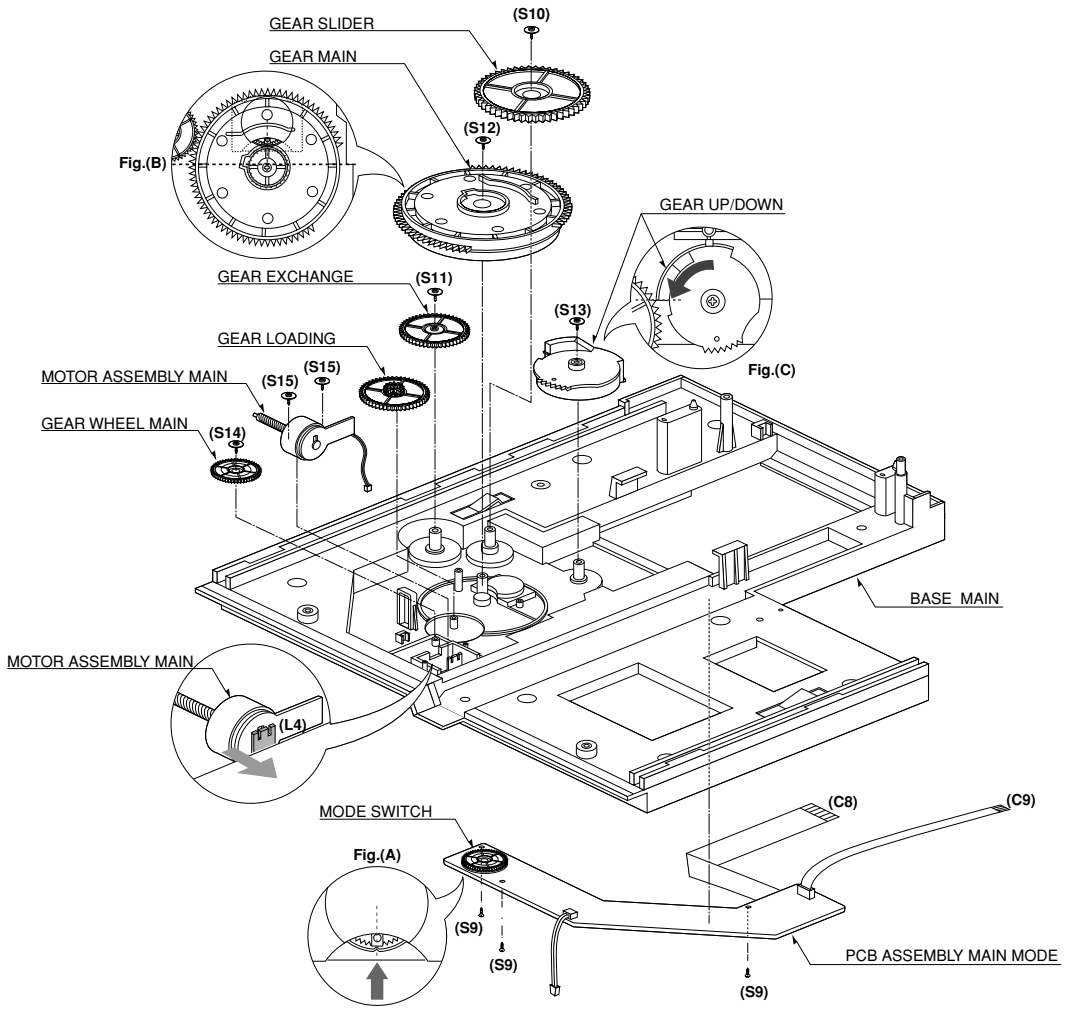


Fig. 4-4

4. Base Assembly Main(Fig. 4-4)

Note

- Put the Base Assembly Main face down(Bottom Side).

4-1. PCB Assembly Main Mode

1) Unconnect the Connectors (C8), (C9).
2) Release three Screws(S9).

Note

- When reassembling, align the Mode Switch position as Fig.(A).
- Put the Base Assembly Main on original position(Top Side)

4-2. Gear Slider

1) Release Screw(S10).

4-3. Gear Exchange

1) Release Screw(S11).

4-4. Gear Main

1) Release Screw(S12).

Note

- When reassembling, align the (A) position of the Gear Main to the (B) position of Mode Switch as Fig.(B)

4-5. Gear Up/Down

1) Release Screw(S13).

Note

- Reassembling, turn the Gear Up/Down in direction of arrow as Fig.(C).

4-6. Gear Wheel Main

1) Release Screw(S14).

4-7. Gear Loading

4-8. Motor Assembly Main

1) Release 2 Screws(S15).
2) Unlock the Locking Tab(L4).

4-9. Base Main

OTHER PARTS LIST -1/1

! = ⚠ SAFTY PARTS
C = Components marked
All components used on this model at the production line are shown in this service manual.
However, please note that not all components will be available as spare parts for after-sales service.
Components marked S and O are designated as spare parts for service and will be stocked at the spare parts centers.
Components marked X and R are not designated as spare parts for after sales service, and will not be stocked at the spare parts centers.

UNIT-NAME	!	C	REF-NO	PARTS-NO	PARTS-NAME	SUFFIX&MODEL
						XD-SPM823 UBC1
		X		S9-205-3E0-000	BAG V3	a
		X		S8-90R-H78-1L0	BOX,DMA5024N HA1UAA	a
		X		S9-20R-E01-3A0	PACKING,DVM-3800	a